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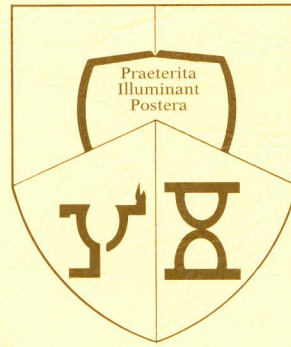
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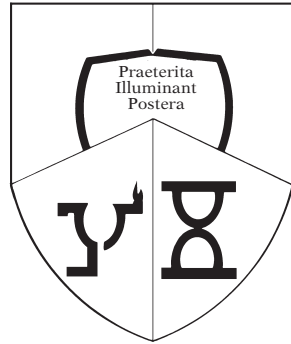


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June 2002
Volume 29, Number 1

Research on the Evolution of Accounting
Thought and Accounting Practice

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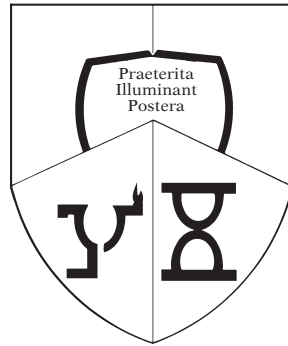
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Helen Irvine
UNIVERSITY OF WOLLONGONG

THE LEGITIMIZING POWER OF FINANCIAL STATEMENTS IN THE SALVATION ARMY IN ENGLAND, 1865-1892

Abstract: Since its inception the Salvation Army has relied heavily on external funds to survive. There is evidence to suggest that at the time of its founding, in 19th century England, and in its early years, financial statements played a powerful legitimizing role. This was crucial to an organization like The Salvation Army, newly formed and in desperate need of funds. This view is consistent with institutional theory, which emphasizes the importance of such legitimacy. However, it challenges the notion, prevalent in academic literature on accounting in religious organizations, that there is a resistance to the use of accounting as a “secular” activity in an organization with a “sacred” mission. The societal context of the early Salvation Army, the unique characteristics of William Booth, its founder, and its struggle for survival in its early years, all demonstrate an emphasis on an image of financial responsibility, and a reliance on the Army’s audited financial statements to convey that image.

INTRODUCTION

The Salvation Army is a religious/charitable organization, part of a world-wide Christian church, probably better known today for its social work than its evangelistic work. It was founded in England in the mid 19th century. In that era, when poverty and social injustice were rife, the new Christian Mission, the forerunner of The Salvation Army, became an organization with a focus on good works and a reliance on the public for funding. Even in those early days, the presentation of a

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sound financial image was vital to its ability to attract funds and to deflect criticism of its unconventional methods.

This paper, which is based on institutional theory and the notion of a sacred/secular tension in religious organizations, proposes that in the Army's early years (1865-1892), the organization used its financial statements to enhance and legitimize an image of financial reliability as a church and welfare service provider. These dates are significant because The Christian Mission began in 1865, and 1892 was the year in which The Salvation Army successfully defended its financial practices in an inquiry that was held into its "Darkest England" scheme. The paper begins by providing an institutional view of legitimacy and the importance of financial statements in creating a legitimate image. Next, the notion of a sacred/secular tension is briefly explored. The significance of the historic setting, Victorian England, is then outlined, followed by a history of the early Salvation Army which focuses particularly on its influential founder, William Booth. The fundraising activities, reporting practices and controversies surrounding financial management in the Army are subsequently discussed. Finally, conclusions are drawn about the significance of a sound financial reporting image to resource-dependent religious/charitable organizations such as The Salvation Army.

AN INSTITUTIONAL VIEW OF ORGANIZATIONS AND ACCOUNTING

Institutional theory offers an interpretation of the wider organizational and social context of accounting practice by emphasizing the influence of the institutions both of society and of the organization. It suggests that these institutions, which have been described as "societal expectations of appropriate organizational form and behavior", take on "rule-like status in social thought and action" [Covaleski and Dirsmith, 1988, p. 562], and develop over a period of time. Instead of, or in addition to, technical considerations organizations adopt institutionally acceptable practices to legitimate their existence [Covaleski and Dirsmith, 1988, p. 562], and, ultimately, to receive the prestige, stability, access to resources, and social acceptance they require in order to survive [Oliver, 1991; Ang and Cummings, 1997; Meyer and Rowan, 1977; Oliver, 1997; Meyer et al, 1992]. Because of this, there is a tendency for organizations within a particular field to assume similar structures and practices. This process, known as institutional isomorphism,

leads to organizational homogeneity [DiMaggio and Powell, 1983; Booth, 1995; Powell, 1985; Covaleski et al, 1993, p. 66]. Consequently, in an institutionalized environment, organizations compete for “social fitness rather than economic efficiency” [Powell, 1985, p. 565], so conformity with institutional rules ensures survival, and contributes to success [Baum and Oliver, 1991; Meyer et al, 1992; D’Aunno et al, 1991].

The pervasive nature of accounting means that organizations which adopt “rational” accounting practices are more likely to be rewarded [Dent, 1991, p. 707]. Any organization that does not conform to societal expectations about how accounting ought to be performed, and about the accountability and transparency required in financial reporting, risks showing to disadvantage against its competitors, losing legitimacy and ultimately funding. Financial reporting, therefore, and the accountability it purports to exhibit, is an institution whose legitimizing power organizations must recognize if they are to survive.

Churches, particularly those dependent on the public for funds, cannot afford to ignore societal requirements for accountability, as demonstrated by the presentation of financial statements, auditing and systems of internal control. If they set themselves apart from the legitimizing institutions of society, they risk the achievement of their own mission. Churches cannot be closed systems because they are dependent on the flow of resources from their external environment.¹ Bielefeld [1992, pp. 52-53], referring to nonprofit organizations, of which religious/charitable organizations are a subset, suggested that churches must be concerned about “bolstering their reputations, good standing and desirability as fund recipients to enhance and stabilize their resource flows” [ibid]. Booth [1995] suggested that institutional isomorphism meant that management control practices had spilled over from the commercial sector to the voluntary sector, by means of the requirements of funding operations, institutionally acceptable practices and solutions, and professional networks. The accountability that is demanded of religious/charitable organizations as a result of institutional expectations, has had a major impact on the management and

¹ A well-established church, such as the Church of England, can overcome scandals more easily than a new sect-like organization. There are numerous accounts of scandals within the established church (see, for example, Parris [1998]), which do not appear to have had a significant impact on the church’s survival.

accounting practices of nonprofit organizations. Accounting is increasingly being appealed to as an indicator of good management, providing value and legitimacy by its very presence. It therefore has a role that goes beyond mere technical considerations, being a practice constructed "in response to societal expectations" [Dirsmith, 1986, p. 357]. It is a powerful legitimizing tool [Carruthers, 1995], and nowhere is its visibility more apparent than in the presentation of an organization's financial statements. This paper suggests that this is not a recent phenomenon. The early financial reports of The Salvation Army demonstrate accounting's legitimizing role during the 19th century.

THE SACRED AND THE SECULAR

In spite of the prevalence of accounting as an institutionalized activity, it has been proposed that there is some potential resistance to the notion that a church, whose agenda is primarily spiritual, should be concerned with money, and as a result, make use of the practice of accounting which has its roots in the secular world of money and business. Laughlin [1988], in his study of accountability and accounting systems within the Church of England, began with some insights into the "central" dynamic" of religious organizations, basing his work on Durkheim's division of all things into the "profane" and "sacred". This notion of a dialectic, a tension between opposing forces, formed the basis for his assertion that within religious organizations there was a potential resistance to accounting, based on the tension between the need to rely on the secular world for the funding of religious work, and the desire to protect the "central sacred sanctuary" of belief from corruption by those very secular forces which helped sustain it [Laughlin, 1988, pp. 23-24].

Booth [1993, p. 50] made the observation that "the dominant ends in (religious) organizations are transcendental, which makes any empirical assessment of their achievement impossible". Accounting and management practices, he asserted, would therefore provide inappropriate measures of spiritual success, and provide a powerful example of a sacred/secular tension.

Perhaps the relationship between a church and money could be thought of as similar to a master-servant relationship. Hegel [1971, p. 175] considered the complex tension inherent in such a relationship, where the servant, in the very act of serving

the master, eventually exceeded the master in worth, thereby reversing the two roles. While relying on money to fulfil its mission, a church's spiritual nature requires an independence of belief and thinking, so a tension develops, being resolved by the interaction of the two opposite notions [Gaarder, 1996, p. 303]. The resolution however, is never set as the dialectical process, "a clash between a purpose or standard and its attempted fulfillment" [Taylor, 1979, p. 59], is a continuous working out of the dichotomy between opposites. The difficulty in a Christian service organization is to balance the mission/money tension in a way that preserves the character of its mission [Jeavons, 1994, pp. 157-158]. This has implications for the way the organization embraces (or resists) fundraising methods, management principles and attitudes to accountability and accounting.

Perhaps this dialectic between churches and money is resolved in practice in at least two ways. Firstly, it may be resolved through the orientation a church has with the world. Kaldor et al [1994, p. 70] made a distinction, based on the work of Weber and Troeltsch, between a church and a sect, with the former having an open orientation to the world in the hope of influencing it, and the latter seeing the world as evil, and drawing a strict boundary around its members. The historic orientation of a religious organization therefore will be a determining factor in the extent to which this tension is felt, and the manner in which it is resolved [Irvine, 1999, pp. 16-17].

The response of members of a religious organization to accounting will therefore have something to do with that organization's historic belief system and culture, and its openness to embracing "secular" practices. Swartz [1998, p. 324] suggested that many religious organizations were open to embracing these practices, as evidenced by the two broad institutional processes at work, secularization and institutional isomorphism. This openness has been observed in other research on the use of accounting in religious organizations. Irvine [1996] challenged the notion of resistance to accounting in the context of the budgeting system in a local church, observing that accounting enhanced the church's ability to achieve its goals. Accounting has been shown to assist members of a religious community in the ordering of their lives, including their financial affairs [Jacobs and Walker, 2000]. The results of a study of internal control systems in US churches by Duncan et al [1999] also challenges the distinction between the sacred and the secular. They found that the notion that accounting was somehow a

“secular” activity was not at issue. Rather than displaying a resistance to internal control as a “secular” practice, the emphasis placed on internal control by churches varied according to their size and the “polity and hierarchical structure” [Duncan et al, 1999, p 142].

The second possibility for resolving any potential dialectic tension between churches and money is in the way money is transformed through the practice of philanthropy, or used for other religious purposes. Jesus advised a rich young man to give away his wealth to the poor [*The Bible*, Matthew 19:21]. Members of the early Christian church held their property in common, and saw the giving of alms to the poor “not as a matter of mercy, but of justice, for the earth was seen as belonging to all people, and no-one had a right to more than he or she needed” [Singer, 1993, p. 60]. William Booth, the founder of The Salvation Army in England, saw his mission as spiritual but also one that involved the movement in the wider community. This emphasis attempted to break down any perceived barriers between the “so-called sacred and secular”, with a great involvement of Army personnel in “that wicked world” [Watson, 1965, p. 274]. Booth believed that “the bad can be sanctified, the secular made sacred — the devil’s tunes, the brewer’s money, the trade in the market-place” [ibid., p. 96].

This holistic view is more consistent with the “multidimensional” notion of Christian stewardship, which has been described as “nothing less than a complete lifestyle, a total accountability and responsibility before God” [Westerhoff, 1983, p. 15]. The steward “stands in a relationship of entrustedness whereby there is a responsibility of diligence and faithfulness in the administration of resources” [Mohon, 1999, p. 4], not just in monetary matters, but in the whole of life [ibid., p. 45]. The Iona religious community in Scotland provides a current example of the way this stewardship obligation is interpreted in practice, with biblical teachings on economics being emphasized as important in the ordering of money and the control of personal finances [Jacobs and Walker, 2000, p. 9]. As part of this responsibility, individuals also “give account of and for their daily lives” [ibid., p. 4], since money and its management cannot be separated from the whole of life. William Booth appeared to have this attitude in the way he practised his Christian faith: he was responsible to God for the way he conducted himself in every aspect of his life, and the way he managed money, particularly money donated by others to the cause, was a significant dimension of this.

The following excerpt from the preamble to the Salvation Army's *Articles of War*, a document "soldiers" (members) signed before being sworn in, illustrates the commitment to whole-of-life stewardship:

I do here declare that I will not allow myself in any deceit or dishonesty; nor will I practise any fraudulent conduct in my business, my home or in any other relation in which I may stand to my fellow men; but that I will deal truthfully, honourably and kindly with all those who may employ me or whom I may myself employ . . .

I do here declare that I will spend all the time, strength, money and influence I can in supporting and carrying on the salvation war, and that I will endeavour to lead my family, friends, neighbours and all others whom I can influence to do the same, believing that the sure and only way to remedy all the evils in the world is by bringing men to submit themselves to the government of the Lord Jesus Christ [Watson, 1965, p. 26].

From all accounts, Booth lived a life consistent with these *Articles of War*, not only in his unstinting devotion to his cause, but in his apparent lack of interest in the accumulation of worldly wealth. He died poor, having survived on the interest on £5,000 [Watson, 1965, p. 94]. In his mind there appeared to be no distinction between the sacred and the secular as money (and accounting) were seen as vital means for discharging his stewardship responsibilities. The acceptance of accounting was therefore desirable as a demonstration of this Christian faith.

The work of both Laughlin [1988] and Booth [1993], which argued for the existence of a sacred/secular tension, concentrated on established denominations with little or no reliance on the general public for funding. By contrast, the early Salvation Army was a breakaway group with no money, no established power base, and no property. This, it is suggested, had a profound impact on the young organization's policies in regard to finances and financial accountability, since it relied very heavily on funds raised from the public. This contrasted with established denominations which owned extensive property and had developed their own internal bureaucratic structures. At the time of the founding of The Salvation Army the Church of England was undergoing considerable change. Whereas in earlier

times the aristocracy, as well as the tax system,² had supplied “all that was required to run the sacred centers and the priestly staff who worked in them” [Laughlin, 1988, p. 30], by the late 19th century, this system was breaking down.³ The Church was losing some of its political power and its parishioners were increasingly staying at home. While membership had decreased substantially, however, the Church of England was not even close to the vulnerability (in financial, organizational and image terms) of the young Salvation Army, whose members were well known for having to take round the “collection box” at public meetings.

The Salvation Army’s balance sheet for the year ended 30th September 1879⁴ [*The War Cry*, 1880, p. 3] shows total receipts of £7,194/6/7, of which £4,723/10/5 (59%) was stated as being received from “outside sources”. Supported only by the voluntary giving of its members, most of whom were from the poorer segments of society, and the money their members collected from the public, the Army did not have the relative financial security of investment income and tithe taxes enjoyed by the Church of England, and it certainly did not have the influence, reputation, property and political influence of that denomination.

The Salvation Army, needful of financial resources from outside its member base, recognized the legitimizing power of accounting. In order to understand this it is first necessary to offer a brief institutional analysis of the social context in which The Salvation Army was established and to provide insights to its early history and the mission of Army’s founder,⁵ William Booth.

² This included the system of “tithe taxes”, where one tenth of “all produce and earnings by parishioners” was paid to the local parish priest and Church [Laughlin, 1988, p. 31].

³ From 1836 onwards, various Acts of Parliament reduced the eligibility of parishioners to pay tithes, culminating in the complete removal of tithe taxes by 1936, when the Tithe Redemption Act of 1936 was passed [Laughlin, 1988, p. 32]. The Act of 1836 was not opposed by the church, probably because of the ill-will the system caused [Norman, 1976, p. 109]. By 1936, the public was at last freed from “the obligation of maintaining the National Church” [ibid., p. 346].

⁴ This balance sheet is reproduced in Figure 7, later in this paper.

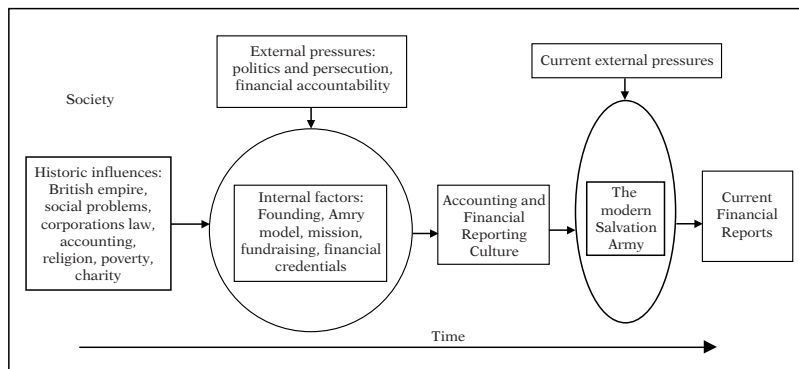
⁵ A new organization, if it is to be successfully established, will be profoundly influenced not only by existing institutional expectations [Dacin, 1997, p. 52], but also by its founder.

THE INSTITUTIONAL CONTEXT OF THE EARLY SALVATION ARMY

The history of The Salvation Army began in England in 1865, when William Booth established the Christian Mission in the East End of London. Figure 1 outlines the significance of external institutional pressures and historic influences which, together with internal factors, set in motion the Army's reliance on public funds, and its consequent use of financial reporting as a legitimizing activity.

Societal Contexts: The influence of both societal factors in the organization's early days and the idiosyncratic temperament, beliefs and mission of William Booth, were profound. It was these factors that established the early culture of The Salvation Army as a resource-dependent organization with a high public profile, outside the boundaries of other religious organizations of the day, with a unique and often unpopular mission. The Army had a desperate need for funds to survive. Its culture emphasized a respect for, and reliance on, a rigorous accounting system and the production of annual, audited balance sheets. These were perceived as demonstrations of Christian stewardship.

FIGURE 1
**An Institutiona View of
The Salvation Army's Historic Context**



One of the institutional elements identified by Scott [1987] as affecting organizational structure was its “imprinting” at the time of its founding. Historical contexts are highly significant, since at the founding of an organization, there will be social

structures and norms to which a new organization must align if it is to be successfully established [Dacin, 1997, p. 52]. New organizations must be seen as “legitimate subunits of the larger social system” [ibid., p. 74] if they are to receive the funding necessary for their establishment. In the case of The Salvation Army, this was a crucial factor in its success, particularly in relation to financial and accounting practices.

The Salvation Army commenced its activities during a period of change in England. The British Empire was expanding rapidly and Britain was becoming established as a mature urban-industrial society. The mid 19th century was a period of advancing prosperity, there was an expansion of joint stock companies and an attendant focus on financial reporting and auditing. The desirability of independent external audits was emphasized by major failures such as the City of Glasgow Bank in 1878. The increased importance of accounting and auditing in the industrial economy was epitomized by the formation of organizations of professional accountants. First in Scotland during the 1850s and in England from the 1870s. The Institute of Chartered Accountants in England and Wales was formed in 1880. The existence of an accountancy profession gave additional stimulus to developments in auditing, a subject which featured prominently in *The Accountant* from 1874 [Chatfield, 1977, p. 121]. From the 1890s, auditing was gradually upgraded as more analytical rather than detailed “routine verification” [ibid., p. 120]. Auditing was increasingly professionalized and founded on concepts of prudence [Maltby, 1999; Yamey, 1977, p. 28].

Yet economic expansion occurred against a background of poverty, drunkenness, crime, and substantial inequities in the distribution of wealth. According to Booth there was “no attempt at Concerted Action” [Booth, 1890] to address these symptoms of a society where power was vested in the hands of the few. In spite of the efforts of social reformers to legislate for better living and working conditions, life was grim for the poor. The established denomination, the Church of England had little effect in alleviating the rising tide of poverty and the effects of social upheaval. Ralph Waldo Emerson [1966, p. 142] wrote of the Church of England in 1856 that “it is the church of the gentry, but it is not the church of the poor. The operatives do not own it, and gentlemen lately testified in the House of Commons that in their lives they never saw a poor man in a ragged coat inside a church”.

The Founder, the Organization and the Mission: Founders have a huge influence on the structure of the organizations they set up.⁶ Their own particular characteristics and practices often become institutionalized in the organization's culture. This was certainly the case with William Booth, the strong, charismatic founder of The Salvation Army. His sense of vision, together with his own poor background and strict attitude to Christian stewardship and financial accountability, had a profound affect on The Salvation Army's funding arrangements and financial practices.

William Booth was born in 1829. He was converted to Christianity as a young man. His working life began in a pawnshop. From 1851, he devoted his time to preaching in London. By 1855 he had become a Methodist New Connexion travelling campaigner, on a wage of £2 per week. In that year he was married to Catherine Mumford, a committed Christian with strong feminist views. Booth was ordained as a Methodist New Connexion minister three years later. In 1861, William Booth resigned from the New Connexion and formed the Christian Revival Association. This was later absorbed into the East London Christian Mission, which, in turn became The Christian Mission in 1865. Booth was deeply committed to ministering to the poor. His sole aim at the inception of The Christian Mission, was "to convert the outcasts the clergy did not reach", and then pass them on to other churches. He often came home "bruised and bloodied", and found that his converts would not venture to the established churches [Collier, 1965, pp. 48-52].

In spite of Booth's authoritarian nature, the Christian Mission had a democratic constitution, and its Annual Conference made decisions about the running of the ministry [Watson, 1965, p. 22]. After years of abiding by the decisions of a committee of 34 people, Booth became increasingly frustrated, so that when in 1876, he was approached by a deputation of evangelists who demanded a more autocratic approach [Collier, 1965, pp. 64-65], he agreed to join them. He confessed that he did not want to found a new sect, but, in 1878, at the annual conference of The Christian Mission, it was resolved by a three quarters majority to scrap the mission's Deed Poll, create a new Deed Poll, and vest control of all mission property in William Booth,

⁶ Pettigrew [1979] studied the role of the founding headmaster of a private British boarding school. He saw purpose, commitment and order, characteristics of the founder, being created and becoming part of the organizational culture of the school.

as General Superintendent, "or his nominee" [ibid., p. 65; *Salvation Army Act, 1931*, First Schedule]. The founding of this new group effectively reinforced the fact that William Booth and his Christian Mission were outside the mainstream of organized Christian religion of the day. This had implications for the funding of the organization.

Booth had been a keen follower of the careers of Wellington and Napoleon, and adhered to the concept of militant Christianity. He spoke of "siege operations" against the Devil and was described in 1876 as the "General of the Hallelujah Army". His mission took on a military-like culture and was gradually referred to as a volunteer Army, and subsequently, in the 1878 Deed Poll of The Christian Mission, as: "a SALVATION ARMY recruited from amongst the multitudes who are without God and without hope in the world, devoting their leisure time to all sorts of laborious efforts for the salvation of others from unbelief, drunkenness, vice, and crime" [*Christian History*, 1990, p. 25].

In that year, Booth composed his "*Orders and Regulations for the Salvation Army*", maintaining that he could not run his "army" without a system [Collier, 1965, pp. 75-76]. A combination of strict rules, and homilies about the lives Salvationists were required for living. In 1879 in Salisbury, a Salvationist and his three sons, thinking the movement "lacked something", brought brass instruments along to their meeting, and accompanied the singing of songs. Hit tunes of the day were adapted into songs for the Salvation Army. Booth's comment "why should the Devil have all the best tunes?" indicated his willingness to use whatever methods were necessary to reach people with his message.

With all the accompaniments of an army, The Christian Mission officially changed its name to The Salvation Army in 1880. William Booth became "The General" instead of the "General Superintendent". The army model continued to gain momentum, with the use of army terminology, the introduction of uniforms, and the publication of the weekly newspaper entitled *The War Cry*. The Army grew, according to William Booth, because of an "unqualified acceptance of military government and discipline" [Booth, 1890, Appendix 2], "the government that God himself has invented" [Wiggins, 1964, pp. 237-238]. This was to include a strict attitude to accounting and an emphasis on economical management.

Early in his ministry William Booth recognized the difficulty of preaching the Christian gospel to people "whose whole

attention is concentrated upon a mad, desperate struggle to keep themselves alive" [Booth, 1890, p. 45]. While his intentions were uncompromisingly spiritual, Booth saw evangelical conversion as "a concomitant of drastic social and economic change — less a religion of stained-glass windows and the music of J. S. Bach, than of soap and a square meal, with noise, cheerful songs, and everyone so busy that they could not be bored" [Watson, 1965, p. 21]. Booth's early "random attempts at social work" included the establishment of "Food-for-the million" shops, where the poor could buy hot soup day and night and "a three-course dinner for sixpence". Eventually abandoned because of "administrative headaches", these shops were nevertheless an attempt to set into place a strategy for offering substantial and tangible assistance to the poor [Collier, 1965, p. 58].

A formal strategy was offered by Booth, when in 1890, his treatise *"In Darkest England and the Way Out"* [Booth, 1890] was published. This immediate bestseller [Collier, 1965, p. 187]⁷ was an attempt to apply the Christian faith to an increasingly industrialized nation. Booth asserted that there was no need to look to "darkest Africa" to confront problems in desperate need of solution. He maintained that of the 31 million population of Great Britain (apart from Ireland), three million lived in "darkest England" as paupers, often homeless, and starving. They were the "submerged tenth", and he likened their condition to the slavery that had been so condemned in Britain 60 years earlier [Booth, 1890, p. 23]. His famous "cab horse charter" proposed that human beings were worth at least as much as a cab horse, of whom it was said, "when he is down he is helped up" and "while he lives he has food, shelter and work" [ibid., p. 20]. The plan included a base in London, with farm and overseas colonies across the world.

The establishment of the Social Reform Wing of The Salvation Army in 1890 provides a vivid example of the lack of separation, in Army culture, of the "sacred" and the "secular". While the Army was described as "not a social reform organization", it was one that applied social reform and welfare work "to the principles on which it was founded" [Sandall, 1966, p. 74]. Booth was convinced of the theological justification for a

⁷ The first edition, of 10,000 copies, sold out on 20th October 1890, the first day of publication. The second edition of 40,000 sold out a month later, with third, fourth and fifth editions were equally popular. Profits made from the sale of the book were donated to the scheme [Sandall, 1966, p. 79].

doctrine that included “both personal salvation and social salvation” [Green, 1990, pp. 29-30]. In 1910, on his 81st birthday, he eschewed a dichotomy between the sacred and the secular, when he described the linkage between spiritual and social work as being essential, the “outcome of the spiritual life of its members” [Sandall, 1966, p. xiv].

Fundraising: The social reform and welfare work of The Christian Mission, and later The Salvation Army, required substantial funds. Booth’s background, experiences and objectives emphasized the raising of money to achieve the mission but not through association with an established religious organization with an assured financial base. Funding the mission was always a challenge for Booth. He had no wealth of his own and no connections with monied persons. Conscious of the need to attract sponsorship and donations, but with a focus on the “submerged tenth” of society, there was little prospect of large scale fund raising from the upper classes. It was therefore necessary to attract other sectors of society where there might be an appreciation of the mission, and a willingness to support it. Unlike the Church of England, which could rely on income from substantial property holdings, and was secure in its own reputation and image, The Salvation Army was completely dependent on the support of the general public. This required constant drives to raise funds which in turn resulted in the importance to the Army of adhering to established societal institutions, such as accounting, in order to maintain its credibility and image of worthiness.

In 1851, Booth’s ministry commenced with the generous support of Edward Rabbits, the owner of a chain of boot stores in London, who offered him 20 shillings per week for three months, in order that he might devote his time to preaching [Collier, 1965, pp. 33-34]. By the time the “Darkest England” scheme was put forward 25 years later, the Army had raised more than £18,750,000 for its work [ibid., p. 185]. The incredible expansion in the work and influence of the Army had occurred by combining a vigorous fund-raising style with strict expense control. Bramwell Booth (William’s son) described money as the “sinews” of the Salvation war [Woodall, 1995, p. 18; Thompson, 1985, p. 21], and from its earliest days, the Army gained a reputation for its constant efforts at money-raising. The collection box became a regular accompaniment to Salvation meetings, as illustrated by a music-hall chorus of the 1880s:

... General Booth sends round the hat; Samson was a strong man, but he wasn't up to that [Booth, 1977, p. 115]

Early donations came from several philanthropists and appeals were made to members and friends. *The Christian Mission Magazine* [1870a, p. 93] of April 1870 informed readers that over £50 per week was required to keep the mission going, dependent as it was on "the voluntary offerings of the Lord's people". Later that year, "friends" were told that "our funds for carrying on this great work are completely exhausted ... brethren and sisters, you must help us or our work must cease" [ibid., 1870b, p. 128]. Constant pleas came from the Army's magazine, not only for money, but for donations of goods:

- our extensive operations, and their purely missionary character, render the work very costly, and only help from without ... can enable us to go forward in the coming year [*The East London Evangelist*, 1869, p. 236];
- our coffers want replenishing [*The Christian Mission Magazine*, 1871, p. 96];
- help by saving us from anxiety in financial matters [ibid., 1872, p. 90];
- we must give more liberally ... we must collect more diligently [ibid., 1873, p. 82];
- 'Funds again!' I think I hear you say, dear reader, yes, funds again! [ibid., 1874a, p. 67];
- Wanted, clothing of all descriptions for the poor! [ibid., 1875, p. 28].

Because of the precariousness of its financial situation, The Army was constantly looking for new ways of raising money. The Self-Denial appeal was introduced by William Booth in *The War Cry* on 14th August 1886, to expand the Army's work in Europe. Fifty thousand people were invited to join the "Self-Denying League" and to register their pledge to boost the contents of the "War Chest" by going without "some article of food or clothing, some little luxury, some ornament, some pleasure" [Wiggins, 1964, p. 216]. This became an annual appeal, focused not only on Salvationists,⁸ but also on the public. General Booth, in 1908, said of the scheme, that it had proved to be one of the "greatest religious financial successes of the age", having

⁸ This was the name given to members of The Salvation Army.

attracted the admiration of “almost every religious and philanthropic organization in existence” [Thompson, 1985, p. 9].

Other schemes were also successful. The formation of The Salvation Army Property League⁹ resulted in more property being acquired in 1887 than in the previous 17 years of its history [Wiggins, 1964, p. 234]. The “Universal Exhibition of Thank-Offerings” in 1887 was organized by the Army “to give every corps, officer, soldier and friend an opportunity of presenting to the Lord a portion of their *goods* (small or large) as a token of their thankfulness to Him for raising up The Salvation Army and sending forth its officers into this and other lands” [ibid., p. 242]. Army officers sent out to new corps were responsible for raising their own finances. Tithing was promoted as a desirable spiritual and financial practice for all Army officers, soldiers and friends, and other creative fund-raising efforts were devised, including harvest festivals, the Tea League,¹⁰ and the Lord’s corner.¹¹

At the end of 1888, General Booth presented a “memorial” to the British Home Secretary, outlining the plight of “vast numbers of men and women” in East London slums. He asserted that shocking conditions demanded some “special and extraordinary effort on behalf of the state”. This was the Army’s first request to the government for aid, but their request for £15,000 was denied. It was to be several years before the British government followed the example set by the Victorian Government in Australia in the early 1890s [Fairbank, 1983, pp. 90-91], when it provided funds for The Salvation Army to perform charitable works.

Booth’s “*In Darkest England*” scheme of 1890 set a target of £1m. To anybody else, this might have seemed an extraordinary amount of money, but in spite of the fact that William Booth

⁹ General Booth announced the establishment of the Salvation Army Property League in *The War Cry* of 1886 [Wiggins, 1964, p. 232]. The proposal was to attract 20,000 members of the League, each of whom would contribute one shilling per quarter. This would generate £4,000 per year, to which would be added other gifts and legacies. The plan was that once the League was established, corps (local churches) could contribute one sixth of the cost of their proposed new buildings, and the Property League would furnish the remainder. It was another example of the Army’s way of meeting its financial requirements by breaking down the cost of its ventures into smaller, achievable amounts.

¹⁰ The Salvation Army packaged tea, and at one stage had 43,344 customers [Wiggins, 1964, p. 225].

¹¹ Produce grown in the garden would be sold, with proceeds going to the Army [Wiggins, 1964, p. 225].

had been “bedevilled by money troubles” since the early days of the Army [Watson, 1965, p. 93], he was unapologetic about his request for funds to put his scheme into operation. He gave examples of the cost to Britain of various war expenses which greatly exceeded the £1 million he was requesting, and which were paid without hesitation by a government committed to extending its global empire:

When John Bull goes to the wars he does not count the cost. And who dare deny that the time has fully come for a declaration of war against the Social Evils which seem to shut out God from this our world [Booth, 1890, p. 251]?

Within three months of Booth’s call to “arise in the name of God and humanity, and wipe away the sad stigma from the British banner that our horses are better treated than our labourers” [Booth, 1890, p. 282], £102,559/1/2d. had been contributed to the scheme. Booth’s logic in his Darkest England scheme was that it would not be “irrational” to expect that the government, or some local authorities, would eventually assist in the plan, since it could ultimately be expected to provide relief in the rates and taxes of the country [ibid., p. 267]. The Army was thus willing to be a channel for the funds provided by concerned donors, and possibly the government, to undertake the work for which it had the vision.

The Army became involved in financial institutions, with its Deposit Bank being set up in 1890. The bank began with no capital, its only security being “Booth’s good name” [Watson, 1965, p. 98]. There were 64 branches in England, Scotland, Wales and Jersey, and one-third of deposits were invested in government securities, with the remaining deposits being lent on mortgage on real estate. Interest paid was 2.5% per annum, and all profits went towards The Salvation Army [Wiggins, 1964, p. 220]. The following year, Booth took over the Methodist and General Assurance Society Ltd. The Army turned this into a “self-formed, self-sustained organization with an administrative staff” [ibid., 1964, p. 227]. The Salvation Army Deposit Bank was defended as being “as righteous as collections and admission fees” [*All the World*, 1890a, p. 29] in its payment and earning of interest. A direct link with the “sacred” mission was claimed when the question was asked in an Army publication, “is it more “religious” to put one’s money by in the traditional old stocking than in a bank which uses all its surplus capital simply and solely to multiply mission halls? We think not!” [*All*

the World, 1890b, p. 208]. William Booth urged officers of the Army's Life Assurance Company to be "God's agents", ideally allying "business principles" with "religious practice" [Wiggins, 1964, pp. 230-231]. These "business principles" included accounting.

Trading was another source of funds for the Army. General Booth had expressed the desire that the Army's social work should become self-funding. There was no shame in being involved in business activities, providing they adhered to strict ethical standards. In all its fundraising schemes, the Army saw no distinction between the money and the mission, the sacred and the secular.

EARLY FINANCIAL REPORTING BY THE SALVATION ARMY

Financial accountability and the proper keeping of accounts were always important to William Booth, and consequently to The Salvation Army. It has been suggested that from the outset the Army was aware of the favorable image generated by implementing accounting systems so rigorous that they "earned the unqualified commendation of financial experts and authorities who had cause to study its workings" [ibid., 1964, pp. 212-213]. As shown in Figure 2 the Christian Mission's Deed Poll required an audited balance sheet. There were, however, no specifica-

FIGURE 2

Excerpt from The Christian Mission Deed Poll

...

Thirdly:- That the said Christian Mission is and shall be always hereafter under the oversight direction and control of some one person, who shall be the General Superintendent thereof whose duty it shall be to determine and enforce the discipline and laws and superintend the operations of the said Christian Mission and to conserve the same to and for the objects and purposes for which it was first originated.

The General Superintendent shall have power to expend on behalf of the Christian Mission all moneys contributed for the general purposes of the said Christian Mission or for any of the special objects or operations thereof but he shall annually publish a Balance Sheet (duly audited) of all such receipts and expenditure.

... Dated this same 7th day of August 1878

Witnesses to both signatures

THOS. WHITTINGTON

J. E. BILLUPS

General Superintendent

WILLIAM BOOTH

G. S. RAILTON

Secretary of the Christian Mission

Source: *The Christian Mission Deed Poll*, 1878.

tions as to the qualifications of auditors or the form of the balance sheet. A study of the Deed Poll indicates that William Booth, as the "General Superintendent", had substantial power to direct the Christian Mission in all matters, including discipline and laws, as well as finance. The requirement for an audited balance sheet appears to have been the only constraint on those powers. Another section of the Deed Poll gave Booth the power to acquire all land, buildings, furniture and fittings "whatsoever which may in his judgment be required for the purposes of the said Christian Mission". The role of the Trustees in relation to such property was to "render him every assistance", with the right of appointment, or revocation of appointment, of those trustees vested in the General Superintendent. Booth was given the power to transfer property "to such persons or person and upon such trusts as he may direct" with the proviso that it was to be done "only for the benefit of the said Christian Mission" [*The Christian Mission Deed Poll*, 1878].

The requirement that the General Superintendent of the Christian Mission provide an annual, audited balance sheet remained in force when The Salvation Army was instituted in 1880. Figure 3 illustrates the way in which the Army accounted for its income, and makes evident its reliance on a firm of chartered accountants to monitor its financial affairs - an efficient and also legitimizing strategy. The independence of the Booths from moneys donated to The Salvation Army is a notable feature of the article. Given General Booth's financial powers, this was an important issue at the time.

Under the influence of Booth financial accountability had been a feature of the East London Christian Mission. Far from being perceived as a "secular" intrusion into "sacred" work, the raising of funds and accounting for it was seen as a spiritual activity, a demonstration of meticulous stewardship, as this excerpt from *The East London Evangelist* [1869, p 236] illustrates:

We this month present our readers with our Balance Sheet, for the year ending Sept. 30th. From it our friends will gather how graciously our Heavenly Father has sent us help in this great work during this period. From far and near funds have been sent us. Though often brought to the very verge of a complete standstill, yet *we have never had to give up work for want of money*. Our conviction is that God is leading us forward, moulding, and fashioning the work, and opening for us spheres as rapidly as we have the right kind of workers to fill them.

FIGURE 3

Finances

The income of the Salvation Army is arranged in two distinct divisions:-

1st. – There are the amounts sent direct to headquarters by subscribers and others.

The particulars of this amount and of the expenditure of the same, with summary of the trade accounts, are published in the annual balance sheet, which may be had on application to us, or to the head-quarters of the Army,

The books at head-quarters are not only audited by us, but are under our direct and continuous control, so that we have the full knowledge of all income and expenditure of every kind whatsoever relating to this division.

From none of these sources of income does the General or Mrs. Booth draw any moneys for their own personal income, nor have they done so for the fourteen years during which we have had the audit of the accounts.

(emphasis added)

2nd. – The second division of income of the Army consists of the local contributions.

These amounts are raised and spent locally by the duly appointed treasurers and secretaries of each separate corps for their own local expenses, under the direction of the officers, they are examined by local auditors, and are under the direct supervision of headquarters.

(Signed) JOSIAH BEDDOW & SONS,

Chartered Accountants.

2, Gresham Buildings, Basinghall Street, London, E.C.

March 8, 1882.

Source: *The Salvation War*, 1882, p. 173.

Lists of contributions such as those shown in Figure 4 were regularly included in the mission's newspaper, together with the names of the contributors. People who made donations to the Army were seen as partners in the spiritual work of the mission, so their contributions were worthy of mention.

Finances continued to be made public in early editions of *The Christian Mission Magazine*. Amidst rousing stories of the work of the mission balance sheets of particular branches of the mission could be found [*The Christian Mission Magazine*, 1875, p. 28;¹² *The Christian Mission Magazine*, 1876a, p. 54],¹³ or

¹² The balance sheet of the Chatham Branch was included as a model, since it was "all but self-supporting" [*The Christian Mission Magazine*, 1875, p. 28].

¹³ The balance sheet for the Middlesboro branch of the Mission revealed receipts from Sunday offerings, tobacco money, donations, and male and female believers' classes, with a final balance in hand of £9/11/3 [*The Christian Mission Magazine*, 1876a, p. 54].

FIGURE 4

Contributions

CONTRIBUTIONS TO THE EAST LONDON CHRISTIAN MISSION FROM OCTOBER 15TH, TO NOVEMBER 15TH, 1869

NEW HALL.				£ s. d.			£ s. d.				
	£	s.	d.								
Mrs. Morris - -	3	0	0	Miss Kelly - -	0	6	0	Mrs. Dursey -	0	5	0
Friend at Stow-	0	10	0	Barnstaple - -	1	0	0	Mr. Carter - -	0	10	0
market - -				GENERAL POOR.				Major South - -	0	10	0
Sir F. Crossley -	10	0	0	Jas. Barlow,	2	10	0	Jas. Barlow,	2	10	0
Anon.	0	10	0	Esq.				Esq.			
				GENERAL WORK.				Mrs. Hogg - -	0	5	0
Barnstaple	1	0	0	Miss Northmore	0	5	0	J.A.B. - -	0	10	0
Mrs. Bradford	1	0	0	Jos. Huntley,	2	10	0	Mrs. Spenser - -	0	10	0
(sale) - -			Esq.								
DESTITUTE SAINTS.											
W. and E. - -	2	12	0	Miss Wilson - -	1	0	0	Miss Oldham - -	1	1	0
McGan				Mr. Belemore -	0	5	0	Miss Diaper - -	0	5	0
Mrs. Keer - -	0	6	0	Rev. H. Cooke - -	5	0	0	Friend - -	0	5	0
Jos. Huntley,	2	10	0	Friend - -	2	10	0	Mrs. Ferguson -	0	5	0
Esq. - -								Mr. F. Brown -	1	7	0
J. F. - -	0	2	6	" at Brighton	0	10	0	Friend - -	0	5	0
Mrs. Dennis - -	2	0	0	W. S. Lean, Esq. -	1	1	0	PERSONAL ACCOUNT.			
E. O. - -	1	0	0	Miss Hurley - -	0	1	0	Barnstaple - -	1	0	0
Miss Arthington -	10	0	0	A.N. - -	0	5	0	EDINBURGH BRANCH.			
Mrs. McInnes - -	2	0	0	W.N. - -	0	5	0	On the Mission -	3	8	3¼
Mrs. Taylor - -	2	0	0	Miss Skey - -	1	0	0	John Melrose,	0	10	0
								Esq.			
Mrs. J. Lambert - -	5	0	0	Miss Chapelow -	0	2	0	Mr. Fairbairn - -	0	5	0
Miss Alcock - -	0	2	0	Mr. J. Wilson - -	0	5	0	Mrs. Nixon - -	0	5	0
Mr. Young - -	1	0	0	Collected by	2	10	3½	Mrs. Hunter - -	0	5	0
				Mrs. Webster - -							
Mrs. Freeman - -	1	10	0	Jas. Paton, Esq. -	10	0	0	Mr. Miller - -	0	2	6
J. S. R. - -	0	5	0	Self-denial - -	0	8	0	A friend - -	0	2	0
Hy. Roper, Esq. -	0	10	0	John Sands, Esq.	10	0	0	Wm. Lyon - -	0	1	0

Source: *The East London Evangelist*, 1869, p. 236.

summaries of the "State and Finances of the Christian Mission". *The Christian Mission Magazine* [1876b, p. 172] of July 1876 included information about the amount "contributed by the people towards the support of the work", as well as details of other mission statistics such as the number of members, public speakers, preaching services, and "anxious inquirers". Some branches had not submitted financial returns, and no information was given regarding the amount expended in the running of the various mission branches, or how much they held in funds.

These summaries appeared semi-regularly in early editions of the Mission's magazine.

Finances were interpreted as having spiritual significance, together with data on the "Total No. of Preachers and Exhorters" and "Anxious Inquirers Recorded". These were usually presented in a positive light, for example, as disclosing "very cheering facts" [*The Christian Mission Magazine*, 1874b, p. 226], although sometimes some information was missing. This is illustrated in Figure 5.

FIGURE 5
District Reports

THE REPORTS FROM THE DISTRICTS FOR THE YEAR ENDING THE 31ST MARCH 1874							
DISTRICT	Total No. of Preachers and Exhorters	Outdoor Services held	Indoor Preaching Services held	Anxious Inquirers Recorded	Amount contributed by the people towards the support of the work		
					£	s.	d.
Whitechapel	55	1040	780	612	307	10	4
Shoreditch	56	832	1040	424	172	13	9
Limehouse	36	312	676	350	165	3	11¼
Poplar	24	1093	988	400	169	18	2¾
Croydon	17	520	520	280	157	3	3½
Hastings	38	364	572	150			
Portsmouth (9 months)	19	546	676	650	390	2	7¼
Wellingboro'	4	156	156	120	73	17	0¾
Kettering	8	116	232	80			
Chatham (3 months)	8	91	104	154	46	13	9
Totals	265	5070	5744	3220	1483	3	0

Source: *The Christian Mission Magazine*, 1874b, p. 226.

The Christian Mission Magazine of 1875 [p. 28] included a balance sheet, reproduced in Figure 6.

The accompanying comment clearly illustrates that not only was correct accounting desirable, but the "economical" use of funds was also highly praised:

We print the above as a remarkable example of economical Mission work. A powerful Mission has been

FIGURE 6
A Branch Balance Sheet

BALANCE SHEET OF THE CHATHAM BRANCH OF THE CHRISTIAN MISSION, From November, 1873, to 1st December, 1874.						
DR.	£	s.	d.	CR.	£	s. d.
To Offerings at Lecture Hall	90	6	1½	By Rent of Lecture Hall	43	16 8
" " " People's Hall	7	13	6	" Stationery and Printing	3	13 3
" Believers' Offerings	19	1	4	" Rent, Gas, and Cleaning of People's Hall	22	8 0
" Donations and Cards	88	12	10	" Seats, and Fittings for same	45	16 0½
" Proceeds of Tea Meetings	8	0	8	" Missionary's Salary and Incidentals	105	2 6
" Grants from Parent Mission	45	0	0	" Furnishing Preacher's House	40	8 10
" Incidentals	3	9	11	" Balance in hand	0	19 1
	£262	4	4½		£262	4 4½
WM. HEATH, <i>Secretary</i> . CAPT. TINNMOUTH, R.M., <i>Treasurer</i> , Royal Marine Barracks, Chatham.						

Source: *The Christian Mission Magazine*, 1875, p. 28.

thoroughly established in a large town, with Mission Hall and Missionary's House well fitted up, and has in twelve months become all but self-supporting; the cost of the first twelve months to our funds being only forty-five pounds! [*The Christian Mission Magazine*, 1875, p. 28].

Auditors: The balance sheet of The Christian Mission for 1877-78 listed Receipts and Expenditure, and was "audited and found correct" by a firm of public accountants in London [*The Salvationist*, 1879, p. 84]. The publication of the balance sheet for the year ending 30th September 1879 [*The War Cry*, 1880, p. 3] (see

Figure 7) included an explanation of the policy of producing annual balance sheets, and an assurance that “every penny received and spent in connection with the Army has thus been publicly accounted for from the first days of The East London Christian Revival Society till this day”.

FIGURE 7

The Salvation Army Balance Sheet for the year ending 30th September 1879

Dr.	RECEIPTS			EXPENDITURE			Cr
	£	s.	d.		£	s.	d.
To Total Subscriptions and Donations for -				By Balance overpaid September 30th, 1878	479	19	10
General Work, including Advance [£500] obtained last year for Completion of New Halls	4,548	13	0	Advances to 108 Stations [see Schedule below]	2,020	2	5
Sick and Wounded [D.S.]	375	12	4	Relief Given to Sick and Wounded, together with Cost of Special Appeals	422	6	6
Millwall New Hall	70	19	1	Cost of Monthly Magazine, Books, Tracts, &c., for nine months together with Grants of Books	1,623	7	1
Training of Evangelists	101	2	0	Cost of Plant, Machinery, Stock, &c., in Printing Department, together with Payments for necessary Alterations of Premises	524	17	10
Thanksgiving Fund	12	0	0	Training of Evangelists, together with Expenses of Evangelists on Trial Expenditure at Councils of War, Cost of Special Evangelistic Effort, and Special Charges	166	18	1
Amounts received from and on Account of certain Stations (see Schedule below)	561	15	9	Reconnaissance ["Searching out the Land"] and Northern District General Expenses	322	11	10
Amounts received for Books, Magazines &c., sold by Book Room during 9 months	1,419	8	8	Office Expenses, Salaries of Clerks, Stationery, Repairs, Furniture, Auditors' Fees, &c.	444	1	6
Balance overpaid September 30th, 1879	104	16	1	Expenditure on Millwall New Hall	125	19	5
<p>NOTE. – That the total amount received from Outside sources towards our General Expenses is only £4,723 10s 5d. That out of this Fund has been paid towards relief of the Sick beyond the Special Fund for their assistance, £46 14s. 2d.</p> <p>For establishment of our Printing Department, £324 17s. 10d.</p> <p>Towards cost of fitting up Millwall Hall, in excess of the money specially contributed for that object, £35 0s. 4d.</p> <p>Thus leaving available for General Spiritual Purposes, only £4,096 18s. 1d.</p> <p>That our payments have exceeded our receipts by £104, and that we owe a deal more since then.</p>				Legal Charges, with Salaries of Secretaries	286	2	7
				Travelling Expenses	162	16	11
				Postage and Telegrams	135	2	11
				Printing and Postage of Annual Balance Sheet, Cost of Appeals, &c.	126	4	11
<p>Audited and found correct JOSIAH BEDDOW & SON, Public Accountants, 2, Gresham Buildings, Basinghall St., E.C.</p>							
£7,194 6 7				£7,194 6 7			

NOTE.- Should these statements leave any Officer or man in uncertainty or doubt, as to any matter, write at once to Headquarters, as we wish every one connected with the Army thoroughly to understand what funds it has, and how they are spent.

Source: *The War Cry*, 1880, p. 3.

The amount received from “outside sources” represented 66% of total receipts, and there was a recognition that this kind of support warranted financial accountability. Refuting the charge that the Army had never published balance sheets, it was pointed out that the balance sheet, for 1879, was actually the 14th that the Army had produced, and that “a firm of auditors of the highest respectability have audited our books for years past” [*The War Cry*, 1880, p. 3]. Josiah Beddow & Son, public accountants, London were the organization’s auditors for at least 14 years. At some stage between 1882 and 1890, this firm was replaced by Knox, Burbidge, Cropper and Co, chartered accountants, London [*The Salvation War*, 1882, p 173; *A Review of the Operations of The Salvation Army*, 1890].¹⁴

William Booth was reported to place great trust in the public auditors who examined the Army’s accounts [Booth, 1977, p. 116]. Bramwell Booth (the founder’s son) recounted a story about Henry Labouchere, the editor of the paper *Truth*, who was openly critical of the Army’s finances, alleging that it had no accounts to show. After one of these attacks, William Booth invited Labouchere to visit the Army’s headquarters, and he arrived to find one of the partners from the Army’s auditors there, with all the accounts ready for his perusal. After one and a half hours of “going over the books, examining the Vouchers, and talking to members of the Staff”, he was apparently quite satisfied, and after that, became “more or less a friend”. The chief value of his approval of the Army’s finances, according to Bramwell Booth, was in the fact that “he was so great an authority on such matters that when he took a thing up and even faintly praised it people accepted its credentials right away” [Booth, 1977, pp. 119-120].

In putting forward the Darkest England scheme, Booth [1890] made reference to the Army’s size, its zeal, its reliance on the power of God, its successful record, and its Army discipline, as proving its capacity to pursue the grand plan. In an appendix to his book, Booth listed the qualifications of the Army for administering the Darkest England scheme. These included: the number of “Officers or Persons wholly engaged in the Work”, a list of property vested in the Army, a catalogue of the social

¹⁴ It is interesting to note that the 1879 balance sheet does not actually balance, the pence column on the receipts side adding up to 7d. when it should be 11d.

work of the Army, the number of officers managing the social branches, details of weekly and monthly circulation of Army publications, and, significantly, a balance sheet. Figure 8 is a reproduction of part of the first appendix to Booth's [ibid.] book:

FIGURE 8

Audited Balance Sheets

Balance Sheets, duly audited by chartered accountants, are issued annually in connection with the International Headquarters. See the Annual Report of 1889 – "Apostolic Warfare".

Balance Sheets are also produced quarterly at every Corps in the world, audited and signed by the Local Officers. Divisional Balance Sheets are issued monthly and audited by a Special Department at Headquarters.

Duly and independently audited Balance Sheets are also issued annually from every Territorial headquarters.

Source: Booth, 1890, Appendix 1.

The Salvation Army emphasized its accountability to the public, and its desire to be frank and open about the Army's dealings, including financial management. The Darkest England trust deed provided for the General to be a "genuine legal trustee", with all properties vested in him. The monies and properties raised through the Darkest England scheme were to be kept separate from those of The Salvation Army, and any breach of trust by the General would be proceeded against by the British Attorney-General [Sandall, 1966, p. 97]. According to Bramwell Booth, his father never touched any of the Army's money after the first ten or twelve years of the movement. While financial arrangements remained in his name, they were "attended to by others", because the founder realized "the necessity for exactness and economy in dealing with money, both private and public" [Booth, 1977, p. 116].

In General Booth's opinion, wherever his soldiers were given the freedom to act, they so swiftly proved their worth "to the hilt" that the authorities would step in to subsidize their work [Collier, 1965, 149]. The Army was not averse to accepting public or government funding to pursue its work, and this drew attention to the group, sometimes in a negative way. It desperately needed to be perceived by the public as a reputable organization if it was to continue to receive the funding it required. However, its requests for public money, together with its

unusual methods and controversial mission, led to a considerable amount of adverse public criticism.

CRITICISMS OF THE FINANCIAL ARRANGEMENTS OF THE SALVATION ARMY

From its earliest days, The Salvation Army had a strange and intense relationship with the public. As a high-profile public movement, it did not confine its activities to church buildings but went out onto the streets, preaching, marching, and making music. In 1903, recalling the time when the Army began, William Booth said "I was laughed at, mocked at, ridiculed and given the cold shoulder by all sorts of people, religious and otherwise, but I went forward" [Wiggins, 1964, p. 251]. In the early days of the "Hallelujah lasses",¹⁵ any publicity that kept the Army's purpose before the public was thought to be "good publicity", including bell-ringing, a crimson-draped donkey, and other stunts designed to attract attention and enable the Army to present its message [Collier, 1965, p. 77]. The fundraising efforts of the Army attracted criticism and financial innuendo. Again, accounting comprised an important defense.

Probably because of its high profile, and its constant appeals to the public for funds, The Salvation Army faced criticism about its financial affairs. It attempted to refute these by reference to its scrupulous accounting systems and accounts. These were advanced as proof of meticulous stewardship. The response in *The War Cry* of 1880 [p. 3], to accusations that "no accounts of our finances were ever published", has already been presented. The Army argued that "every penny received and spent in connection with the Army has thus been publicly accounted for from the first days of The East London Christian Revival Society till this day".

The Darkest England proposal put the Army in the spotlight because of the vast amounts of money the scheme was to cost, and the donations that it attracted. Figure 9 is typical of the "abusive cartoons" about William Booth that were published in the 1880s. Other critics described William Booth as "Field Marshal von Booth", a "brazen-faced charlatan" and a "pious rogue" [Collier, 1965, p. 194].

¹⁵ This was the nickname given to young Salvationist women.

FIGURE 9
A Caricature of William Booth



Now, Mr. Booth, let us know what you are going
to do with all this money!

Source: Irvine, 1934, pp. 544-545.

After the Darkest England scheme was launched, rumors began to circulate about the financial aspects of the scheme. The officer who had been in charge of one segment of the scheme, Commissioner Frank Smith, resigned, amidst charges of financial irregularity. It was also suggested that General Booth kept no accounts of any kind. Rumors grew that funds raised from the Darkest England scheme were being merged with the general funds of The Salvation Army [Sandall, 1966, pp. 101-102]. The Salvation Army's publication *All the World* [1891, p. 236] included a refutation of this and other charges, prepared by the Army's auditors. This is reproduced in Figure 10. It is worth noting that much emphasis was placed on favorable opinions expressed in the financial press.

One rumor even suggested that Booth was planning to abscond with £2 million of funds from the Darkest England scheme. General Booth wrote in *The War Cry* of 6th August, 1892:

FIGURE 10

The Keeping of Accounts

THE SALVATION ARMY ACCOUNTS.

The following letter has been addressed by our accountants to the Chief-of-Staff. It may be of interest to our readers, and we print it accordingly:-

DEAR SIR,-

In reply to your inquiries as to the nature and value of the criticisms which have appeared in the public press on the above accounts, we may say that they have been of three types -

1. The simple statement that "General Booth keeps no accounts of any kind whatever."
 2. Adverse criticism.
 3. Favorable criticism.
1. The "Times" and "Standard" were the only papers making statement No. 1, as the result of original research! though many minor papers quoted from their articles. Both these papers have been regularly supplied with the annual accounts, and have reviewed them on several occasions!

In reply to the "Standard" article (which appeared first), we wrote as follows:-

1. The books of The Salvation Army are accurately kept, and compare favorably with any of our large Companies, and are, therefore, needless to say, superior in this respect to the great majority of charitable institutions.

2. The internal check upon receipts and payments is complete, and is jealously enforced.

3. General Booth does not, nor has he ever, drawn any remuneration from the funds of the Army.

4. Over fifteen thousand copies of the audited annual Income and Expenditure Accounts, Balance Sheets and Lists of Subscribers are distributed yearly, whilst anyone applying for a copy is at once supplied.

5. In addition to the system of internal check in use, a staff of competent traveling auditors is constantly employed, whilst our representatives are at one or other of the Army Depots for five months in every twelve, for the purpose of conducting a thorough and independent audit of the transactions of the year.

We are, Sir, your obedient servants,
KNOX, BURBIDGE, CROPPER and Co.,
Chartered Accountants, London and Sheffield.

16, Finsbury Circus, London, E.C., November 6th

2. "Scrutator" in "Truth" is the only sample of the second class of criticism, so far as we are aware, though, in this instance also, extracts appeared here and there in the provincial press. The value attached to "Scrutator's" criticism by independent experts may be gathered from a leading article which appeared in the "Accountant," dealing exhaustively with "Truth's" article, and from which we may quote as follows:- "It may be premised that when a man sits down to criticize at considerable length accounts of any description, he should at all events be possessed of a knowledge of the elementary principles of book-keeping. We think we shall be able to introduce ample evidence to show that this gentleman plainly does not understand what he is talking about, and that once again the old adage is illustrated that 'a little knowledge is a dangerous thing.'

"The item of the net surplus of the Army (otherwise their capital) could not be more clearly put than is done in these accounts, and we must unavoidably come to the conclusion that Mr. Scrutator does not understand the plainest figures.

"Why, if 'Scrutator' had gone through the first exercises in Hamilton and Ball, he would not have fallen into such a childish blunder."

In view of the source from which the very plain opinions come, further comment from us would be superfluous.

3. As samples of the last class, we may quote:

(a) The "Accountant", which said "The Salvation Army accounts are clear and undoubtedly well kept," and "Altogether these accounts are very credible specimens, and we only wish that the accounts of all charitable institutions were as carefully and clearly kept," and again, "As we have already said, the printed accounts speak for themselves and will be clear to all who have an elementary knowledge of accounts."

(b) The "Financial Times," "There is no question, after a perusal of the accounts and certificates, but the books of The Salvation Army are in perfect order."

It is hardly necessary for us to emphasise the obvious discrepancy between the opinions of No. 2, the Amateur, and No. 3, the Experts.

Yours faithfully,
KNOX, BURBIDGE, CROPPER & CO.
W. BRAMWELL BOOTH, ESQ.
101, Queen Victoria Street, E.C.

Source: *All the World*, 1891, p. 236.

... I have been charged definitely with using the money given for the poor for my own glorification, luxurious indulgence and family aggrandizement ... The accounts of the social scheme it has been alleged are imperfectly kept ... and the whole of our financial statements are unreliable ... It has been said that the money has not been spent at all, or not as proposed ... [Sandall, 1966, p. 92].

The Times suggested that a committee should investigate the scheme's legal and financial aspects. In 1892 an inquiry was held by five members, one of whom was Edwin Waterhouse, the President of the Institute of Chartered Accountants in England and Wales. 18 meetings were held and 30 witnesses called [Sandall, 1966, p. 93]. Access to all records was given, and 16 of the social centers were visited. In considering whether the money raised was devoted exclusively to the Darkest England scheme, the committee had to take note of whether it was expended in a "businesslike, prudent and economical manner, with properly kept accounts" and whether the property so raised was secured from "misapplication" [ibid., p. 94]. The committee found that the money was being "properly spent", and gave the scheme their full approval [Watson, 1951, p. 19].

The inquiry vindicated Booth, finding that he had "drawn no income from mission or Army funds in twenty-seven years as an evangelist" [Collier, 1965, pp. 195-196]. Further, the committee held that "books are kept on a proper double-entry system ... audited by a firm of very competent chartered accountants ... vouchers of all payments are kept" [Sandall, 1966, p. 94]. This was consistent with the Deed Poll of the Trusts of the Darkest England Scheme, which gave the General power to "determine and enforce the laws and to superintend the operations" of the scheme, provided that "full accounts of all moneys contributed collected or received for the said Scheme and of the application thereof shall be kept in such manner as to keep the same always distinct and separate from the accounts of all other funds of the Salvation Army" [ibid., pp. 328-329]. *The Times*, however, suggested after the inquiry that while the social wing of the Army was substantially in debt, the "spiritual wing" was so prosperous that it could advance the money to sustain the social work [ibid., 1966, p. 96].

The Army was aware of these and other criticisms, and sought to correct these impressions at every opportunity. The tenor of the Army's response was to present itself as a financially reliable organization. The primary claims to financial reliability

rested on the provision of a balance sheet audited by a reputable firm of public accountants, the separation of various funds to ensure that donations were used for the purposes for which they were given, and the existence of a reliable accounting system, including a stringent budgeting process, and strict monitoring of expenditure.

CONCLUSIONS

The Salvation Army is the product of a number of influences including the vision of William Booth, the society in which it was formed, its own distinctive culture and the institutional forces which influenced it, especially during its early years. Throughout its turbulent history, the Army has struggled to establish credibility, to promote its mission, to develop and maintain its own distinctive identity, and to raise the funds necessary to fulfill its mission. Its survival can be attributed to its ability to maintain an image acceptable to society, both in terms of pursuing its mission and the conduct of its financial affairs.

Accounting, as a powerful societal institution, and as one of the components of the Army's unique culture, played a significant role in presenting an acceptable financial image. From its early existence, the presentation of audited financial statements was a valuable aid to assuring the public of the Army's financial credentials and thereby securing a legitimate claim to the funds it required to continue its mission. Accounting, far from being perceived as a "secular" intrusion into its "sacred" affairs, enjoyed an important position in the organization. It is suggested that other resource-dependent religious organizations, especially those with an open orientation, are also likely to demonstrate little conflict between the sacred and the secular, and to embrace accounting as a valuable legitimizing tool.

Covaleski et al [1993, p. 66] observed that institutionalization is a "profoundly political" process, reflecting the relative power of interests and actors. Accounting systems, which are intended to be symbolic and provide legitimacy, actually transcend that status, and are found to influence the way "external and internal constituents think about and act concerning the organization" [ibid., 1993, p. 67]. An interesting research question, therefore, would be a consideration of the extent to which "institutionalized legitimating practices . . . penetrate and influence internal organizational practices" in historical settings [ibid., p. 68]. In other words, does the enforcement of formal organizational practices that have come about as a result of

institutional pressures result in “merely cosmetic changes”, or do they have an impact on, for example, internal resource allocation decisions [Covalesski and Dirsmith, 1988, p. 565]? It may be at this level that there is more resistance to “secular” accounting practices, as suggested by both Laughlin [1988] and Booth [1995], when accounting actually attempts to do more than legitimize an organization’s existence and claim for financial resources.

The functioning of accounting in religious organizations remains a substantially unexplored field in accounting history. Examinations of the practices of financial reporting and internal control in these organizations offer important insights to the role of accounting in the relationship between the sacred and the secular and its significance in arenas beyond the corporate world.

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Ciarán Ó hÓgartaigh
DUBLIN CITY UNIVERSITY BUSINESS SCHOOL,
Margaret Ó hÓgartaigh
ST. PATRICK'S COLLEGE, DRUMCONDRA
and
Ingrid Jeacle
UNIVERSITY OF EDINBURGH

“HOW IT ESSENTIALLY WAS”: TRUTH CLAIMS IN HISTORY AND ACCOUNTING

Abstract: This paper compares and contrasts the conceptualization of “profession” in history and accounting. Professional history and, to a more limited extent, professional accounting have their 19th century origins in notions of scientific method and objectivity as well as in motives of “closure” and exclusivity. The paper argues that these “scientific” origins of both history and accounting rendered them exclusive not only in membership but in methodology. As scientific approaches relied on documentary evidence, various rich, if less reliable, sources of evidence were excluded. This resulted in the representation of a limited and flawed “reality” in both history and accounting which led to 20th century threats to their legitimacy. The paper concludes that exploration of the interfaces between history and accounting offers new perspectives on both disciplines as we enter the 21st century.

INTRODUCTION

The 20th century was a period of significant change in accounting. Early decades witnessed the growing strength of a newly-established profession of accountants. In time, this professionalization became firmly entrenched with the advent of various accounting regulatory bodies supported by company legislation. The lowly bookkeeper emerged as a powerful controller [Hopwood, 1994]. To gain deeper insights into new

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practices, accounting researchers responded by tailoring their methodological approach and surveying their fields of inquiry from broader perspectives. The importance of historical context increasingly emerged as a key issue of late 20th century accounting research. Whilst historical accounting research is not a new phenomenon, it became infused in recent decades with a wider conception of the social world in which accounting operates. "Genealogies of calculation" [Miller and Napier, 1993] emerged to enrich our understanding of the accounting craft.

Consistent with this broader conception, accounting itself has been variously described as cartography [Solomons, 1978], science [Chambers, 1964], social science [Mautz, 1963 and Lehman, 1990] and behavioral science [Lee, 1973]. These characterizations of accounting originate in conceptualizations of accounting ranging from its objectivity and neutrality (in charting the landscape and measuring the attributes of the reporting entity) to its formation by, and effects on, society. Past transactions and events are the common coinage of history and accounting. Accounting defines its essential elements, assets and liabilities, as future benefits based on past transactions and events and values assets at depreciated historical cost (or revalued amount). Reflecting accounting's foundation in historical cost and many other striking parallels between history¹ and accounting, this paper explores the linkages between history and accounting by comparing and contrasting the conceptualization of profession in both history and accounting.

Important links between research in history and accounting history have been considered by, for example, Fleischman, Mills and Tyson [1996], Funnell [1996], Parker [1998] and Oldroyd [1999]. By placing accounting in the context of the discipline of history, the present paper contributes fresh insights into the development and nature of both history and accounting as professions. The paper argues that there are many similarities in the methodological development of history and accounting. Although these developments are not necessarily contemporaneous, both history and accounting gained legitimacy as professions partly through their adoption of apparently scientific

¹ The term 'history' is ambiguous in English and many other languages, meaning — on the one hand — *res gestae* or the course of human events and — on the other — *historia rerum gestarum* or the reports of those human events rendered by historians. Throughout this paper, the term 'history' is used in the latter sense.

attire. By doing so, they excluded elements of the world which did not meet standards of evidence and objectivity. Hence, their strength — their apparent objectivity — is also a weakness: their inability and/or unwillingness to embrace as evidence more intangible elements of the world they attempt to represent. These limited perspectives in history and accounting left areas where history and accounting would not go — areas which were inevitably explored and populated by other disciplines and other sources of information.

The paper is in four main sections. The first section sets out the 19th century conceptualizations of accounting and history as professions. It reflects on the origins of scientific approaches to historiography which characterized the early professional claims of historians. Similar claims regarding accountants, particularly in the US, in the 19th and early 20th centuries are explored. The second section argues that, while the rhetoric of these scientific claims strengthened both professions' early credibility, they also limited their perspectives of the world to representations which could be supported by "reliable evidence" such as documents and transactions. As criticism of the exclusive nature of professions emerged, history and accounting, being exclusive in both membership and method, were inevitably undermined.

Drawing on the first two sections, the third section evaluates the emergence of truth claims in both history and accounting in the light of perceptions of the subjectivity of science. The paper concludes by exploring the potential of the perspective adopted in extending our understanding of history and accounting and our appreciation of the opportunities each offers to the other.

THE ORIGINS OF PROFESSIONAL HISTORY AND THE PROFESSION OF ACCOUNTING

The characterization of both history and accounting as professions emerged in the 19th century. As a response to infringements by others (such as literature scholars, partisan historians and philosophers) onto the territory of history, the 19th century German historian, von Ranke, distinguished history from philosophy and literature. Von Ranke argued that "to history has been assigned the office of judging the past, of instructing the present for the benefit of future ages" [in Stern, 1953, p. 57]. This notion of history as a profession was further propagated in the late 19th century by the education of several prominent turn

of the 20th century Anglo-American historians, such as John W. Burgess [see Brown, 1951]. Journals such as *Historische Zeitschrift* (founded in 1859), *Revue Historique* (1876), *Rivista Storica Italiana* (1884), the *English Historical Review* (1886) and the *American Historical Review* (1895) promulgated “new methods of scientific scholarship” [Iggers, 1997, p. 27]. While history and historiography undoubtedly have a long history, in the late 19th and early 20th centuries historians were increasingly conceptualized “as a professional group with its own code and rituals that governed how the members related to each other, to outsiders, to reality and to what it valued most” [Parker, 1979a, p. 193], leading Bury [1903, p. 7] to declare that “history is a science, no less and no more”.

The conceptualization of history as science was not uncontested (see Ausubel [1950] and Black [1965]). Neither did it necessarily claim that its process of explanation was identical to that of the natural sciences but that it is, as defined by Kuhn [1970, p. 167], “a community of experts bound together by rigorously defined questions and highly technical methods”. The scientific nature of history was one of method, of handling and interpreting evidence rather than that of cause and effect: “the collection of facts, the weighing of evidence as to what events happened, are in some sense scientific; but not so the discovery of the causes and effects of these events” [Trevelyan, 1930-34, p. 48].

Similarly, early representations of accounting attempted “to lift accounting and audit practices beyond the status of craft knowledge and to connect them with relatively established forms of scientific thinking” [Power, 1994, p. 5]. It was the practice of both accounting and history — rather than the outcome — that was draped in scientific attire. The science was in the search, in the process rather than in the product, of history and accounting: “when we speak of accounting . . . as a science, we are referring to its *method*” [Spencer, 1963, p. 310].

Further, while accounting, like history, has been practiced over a long period — a longevity which was used to legitimize its status [Carnegie and Napier, 1996, p. 11] — the accounting profession in the US, in Scotland, England and Wales and in Ireland as well as in Canada, Australia and New Zealand also emerged as a profession in the 19th century. This was undoubtedly part of the professionalization movement of the period but also a response to the changing environment of the time [Walker, 1995] and to the encroachment of others on the accounting (or bookkeeping) fields [Walker, 1991]. Johnson and

Kaplan [1987] and McWatters [1995] suggest that this period also marked the emergence of management accounting information in the wake of technological advances, intensified competition [McWatters, 1995, p. 197] and “great advances in transportation and communication” [Johnson and Kaplan, 1987, p. 8]. Growing as a profession, historians (such as von Ranke and Trevelyan) distinguished between “the chronicler and the historian” [Evans, 1997, p. 25], and accountants between the book-keeper or clerk (or, more recently, the accounting technician) and the accountant [Abbott, 1988; Kirkham and Loft, 1993].

Saks [1983, p. 1] discusses the “shifting and diverse range of theoretical frameworks” through which the emergence and expansion of the professions in the late 19th century have been examined. This section explores these frameworks as they relate to the emergence of professions generally. The importance of the social and economic context, education, professional qualification and techniques to the legitimization of professions are discussed. The paper then draws on these characterizations of professions to examine common characteristics of history and accounting as professions.

The emergence of the 19th century concept of profession: Both history and accounting became institutionalized and structured through church and government and differentiated themselves — like many other intellectual disciplines — “from a primary religious matrix” [Parsons, 1968, p. 537]. For example, monks had a long tradition of keeping annals while religious organizations and city states maintained records of institutional wealth, consistent with early characterizations of accounting as assisting in the stewardship function. In history, “from Thucydides to von Ranke, the key institution which gave unity to society and provided the thread of historical narrative was the state” [Iggers, 1979, p. 1]. Early historians “lived in a largely illiterate world and in their concern for writing they constituted an élite within an élite . . . For them public affairs were predominantly, almost exclusively, the only thing that mattered” [Hay, 1977, p. 7].

Population growth, urbanization and an increasingly affluent society provided the conditions for the growth of the professions in the mid to late 19th century. Increasing technology, as well as scientific developments, increased the demand for engineers, accountants and medical practitioners. The development of the railways, for example, made the need for careful engineering and accounting procedures all the more acute [Gourvish, 1988]. Perkin [1996] has noted that the move from “agriculture

to industry to services” facilitated the growth of the professions. Additionally, a degree of “specialisation leads directly to professionalism” [ibid., 1996, p. 22] — and/or *vice versa*: “with professionalism has come specialisation” [Porter, 1995, p. 14].

This late 19th century concern for standardization and specification was preceded by the emergence of quantitative as opposed to qualitative measures of weight and distance in the late 18th century, explained by Kula [1986, p. 21], as the imposition of both “metrological and juridical equality” in a barter-based society. Furthermore, as Thompson [1988, p. 38] suggests, this period saw a “transition from an aristocracy of landowners not to a democracy but to an aristocracy of business and professional talents”. Professions sought to control the supply of entrants. Once this was achieved, they asserted their sole right to practice a particular skill.

This tradition of exclusivity relates, in part, to the development of the professions for “gentlemen”, in other words, those who did not work with their hands. Walker [1991] suggests that this gentlemanly idea of profession characterized professional formation in 19th century Britain. Such gentlemanly aspirations also partly explain why surgery was originally thought inappropriate for gentlemen. Originally, too, a physician was precluded from “performing physical examinations” [Parsons, 1968, p. 541]. This idea is put to humorous effect by Alan Bennett [Bennett, 1992] in his play, *The Madness of George III*, when the king’s physician categorically refused to examine his patient.

The desire to distance the professional from its subject was also true in the quest for quantification in accounting. Quantification has strong cognitive consequences which distance the reader from the process and product of accounting. As Porter [1995] points out, quantification established a distance between the reader and the object being quantified: “In a written form, discourse is less tied to the immediate context of persons, time and place” [Goody, 1986, pp. 53-54]. This paralleled the increasingly complex and impersonal relationships of the business environment from the mercantile capitalism of the 15th century to the industrial capitalism of the 19th century, a process of change which “involved a shift from particular and personalistic audiences (e.g. a business partner) to general and institutionalized audiences (e.g. a market)” [Carruthers and Espeland, 1991, p. 47].

Such conditions provided fertile ground for the development of accounting in particular. They led not only to an increased demand for services but allowed professional organiza-

tions to shape and, ultimately, control the means by which these services would be supplied. Professions “compete in the societal market for income, power and status” [Perkin, 1996, p. 4]. They must also prove that their service is “indispensable”. If they manage to do this, the professions’ status was raised and, by extension, the “psychic rewards (deference and self respect)” [*ibid.*] which many occupations sought. In the quest for legitimacy, therefore, professions needed to establish thresholds and rules which controlled entry into the profession and patrolled its practice.

The increasingly scientific nature of professionalization, with its emphasis on the standardization of training and entry, contributed further to the exclusivity and elevation of professions. This was particularly evident in science where technological knowledge and lack of access to scientific education constituted a considerable barrier to entry (see, for example, Rossiter, 1982 and Phillips, 1990). Therefore, building a profession on “scientific” foundations raised the barriers to entry and added to the mystique of the professional technique. Professions promoted their own privilege through the rhetoric of educational qualification and “scientific” method. Indeed, the professionalization of medicine was directly related to scientific developments. With an increasing focus on “scientifically based standards of competence” [Perkin, 1996, p. 14], the concept of a trained-professional became the desirable norm.

The focus on training meant that, to a certain degree, “careers came to be open to talents; the hereditary basis was no longer legitimised” [Parsons, 1968, p. 545]. However, inequalities undoubtedly remained. Some professionals, such as solicitors and accountants, required future members to serve an apprenticeship. This, as the Commission on Vocational Organisation in Ireland [Commission on Vocational Organisation, p. 355] pointed out, excluded the “poor boy”. The “poor girl” was not even mentioned. As Kirkham and Loft [1993, p. 510] comment “the professional accountant was not only socially superior and less numerous than the clerk, *he* was a man and the mere clerk was increasingly a woman.” Similar distinctions between the “professional” (male) historian and the “amateur” (female) are described by Smith [1998] in the context of the emerging professionalization of history.

The emphasis on qualifications is closely linked to the status of the profession. With the emphasis on qualifications and also on apprenticeship, entry to the profession was restricted to those with education and influence. These two attributes of

education and influence were closely linked where schools existed “to prepare children for a place in society which their parentage determined with more or less certainty” [Dore, 1976, p. 16] — a “class stratification” which sharpened in 19th century Europe [Iggers, 1975, p. 46]. Credentials were therefore used to reinforce the monopolizing tendencies of professions and perpetuate their class traditions. The poet W.B. Yeats [cited in Perkin, 1996, p. 390] referred to “the despotic rule of the educated class”. It was this class which dominated the professions.

The cachet of credentials was part of the development of professionals. Educational hurdles were raised as the available pool of talent widened, evolving inexorably to the tendency that university attendance became increasingly the norm in professional education: Dore [1976, *passim*] diagnoses this as “the diploma disease”.

This foundation of university education was especially true of professional history. The university was where “members of the profession were trained” [Evans, 1997, p. 20]. It “evolved from a nursery of dogma into a laboratory of scientific truth” [Novick, 1988, p. 33].

The university also acted as “the gatekeeper to the career hierarchies” [Perkin, 1996, p. 395]. In the continental context, the university was “organised about the four faculties of theology, philosophy, law, and medicine” while the English system was “generally nonspecialised” [Parsons, 1968, p. 539]. In this characterization of the professional context, the nexus of professional accounting development — as “an ‘applied’ branch of the professions”, having a “social primacy” — was situated outside the university. History, having a “cultural primacy”, had its roots in the medieval university [Parsons, 1968, p. 537].

American accountants “perceived themselves as practical implementors of the science of accounts” [McMillan, 1999, p. 8], — though the notion of accounting as science was later challenged by, for example, May [1943] and Ross [1966]. While a university education also comprised part of the rites of passage to membership of the accounting profession in the US — which emphasized its scientism and credentialism earlier than elsewhere [McMillan, 1999] — such scientific privileging was less central to the emergence of the accounting profession in other countries. For example, Walker [1995] concludes that professional accounting organizations in Scotland such as the Society of Accountants in Edinburgh (SAE) and the Institute of Accountants and Actuaries in Glasgow (IAAG) had their genesis in political and institutional conflict and structural economic change.

Nonetheless, qualifications and credentialism became an important part of their quest for legitimacy: "Once the challenge to their dominance in the market for the provision of insolvency services had been repelled, and on the acquisition of Royal Charters, the SAE and IAAG began to assume the persona of qualifying associations by the establishment of structures for the testing of professional knowledge in 1885 . . . and by operating closure strategies based primarily on credentialism" [ibid., pp. 306-307].

Hence, while history and accounting had distinct roots, like many other professions, both drew sustenance from scientific credentials as a means of propagating and protecting their growth. As the next section outlines, while there are parallels between the history of history and the history of accounting, there are further, deeper similarities to be found in the nature of the accounting and historical functions.

THE NATURE OF ACCOUNTING AND HISTORY

Documents are the historian's raw material. The increasing confidence in science in the late 19th century provided historians with the motivation to study such documents as if they were insects under a microscope. The drive towards greater professionalization in this period can be perceived as part of the tendency to establish, beyond reproach, the importance of certain occupations in the successful management of the machinery of state. The professional ideal echoed the Victorian emphasis on efficiency. The desire for state efficiency played into the hands of professionals. Doctors, nurses, teachers and engineers were needed to develop the newly efficient state.

The growth in literacy during the 19th century gave history and accounting a readership hitherto unable to unlock their meanings. Once more, this rendered their development similar to each other but different to some other professions such as engineering and medicine. Medics, for example, seek out and diagnose disease. Engineers construct tangible, physical structures. The truth claims of history and accounting depended on less concrete realities and, as a result, their practitioners rested those claims on more ostensibly tangible, documentary foundations.

The professionalization of history meant that "history was now pursued less by people in public life . . . than by a group of technically trained scholars who increasingly wrote more for a scholarly audience than an educated public" [Iggers, 1975, p. 2]. Both history and accounting were sciences of the articulate,

discourses of the literate and, in the case of accounting, the numerate. Given the representational, written nature of accounting, however, it, like history, also depended on the growth of literacy not only for the supply of its members but for the demand of its *clientele*.

The written, published produce of both professions added to their truth claims and the rhetoric of reality — the mere writing of something made it appear to be more “true” [Ong, 1986]. Carruthers and Espeland [1991, p. 56] argue that “in a written form, meanings appear more “fixed”, relative to oral forms . . . When the text is an account, this presumption of a fixed “meaning” amounts to a belief in an objective economic reality that can be accurately represented and measured”. They also suggest that double entry bookkeeping portrayed a scientific process, a “rhetoric of economic rationality” [p. 31]. As Carnegie [1997, p. 243] suggests, “double entry accounting, as a mystery to the laity, also served to mark off the accounting profession from other professional groups”.

Solomons’ [1978] and Chambers’ [1967] descriptions of accounting as cartography and science respectively appeal to its neutrality, what has been described in history as “*Wie es eigentlich gewesen*” (how it essentially was) [von Ranke, 1973, p. 119]. However, this characterization of history has more recently been translated to mean not only what actually happened but an attempt to understand “the inner being of the past” [Evans, 1997, p. 17], echoing accountants’ attempts to portray the “substance of transactions” [Accounting Standards Board, 1994]. The *Accountants’ Handbook*’s definition of objectivity in accounting as “the expression of facts without distortion from personal bias” [Arnett, 1961, p. 65] and other contemporaneous characterizations of accounting as invulnerable to “emotive considerations” [Burke, 1964, p. 842] are Rankean in their rhetoric. History is “congealed interpretation” [Jenkins, 1991, p. 44], accounting is “interpretation and simplification” [Littleton and Zimmerman, 1962, p. 21].

Professional judgment is at the heart of such interpretation of (in the cases of both history and accounting) historical and (in the case of accounting and, in some respects, history) economic events. Both history and accounting build pictures of a less tangible reality, the picture itself being, on the one hand, a product of the historian’s and the accountant’s personal and professional paradigm and shaped, on the other, by the interpretation of the reader. Accounting and historical interpretations are neither right nor wrong but generally agreed upon, in

accordance with convention. In both, objectivity is attained through adherence to conventions validated and empowered by consensus. This has led to the emergence of the “professional historian” and the “professional accountant”, having the conventional characteristics of a profession, such as a particular training and route to entry, a conceptual emphasis and an identity which the profession protects. However, the adoption of professional and scientific methods, while painting an aura of neutrality also neutralizes personal judgment. The power of the profession becomes “not power plus legitimacy, but power minus discretion” [Barnes, 1986, p. 194].

In the US, late 19th century conceptualizations of accounting as “the mathematical science of values” [Sprague, 1889, p. 123] suggested that it was “a means to reveal reality that would otherwise remain hidden and lost in the business world” [McMillan, 1999, p. 26]. In other words, bookkeeping was a science whose principles revealed reality. This echoes Elton’s [1991] metaphor of the past as the drama behind the curtain waiting to be revealed and Evans’ [1997] image of the historian as the sculptor chiseling a granite block to reveal the truth which lies beneath. In doing so, however, both history and accounting interpret the evidence and report to the reader based on those interpretations, choosing to chisel in a particular direction and recognizing one element of reality over another. The dust discarded by the sculptor itself contains remnants of reality unrevealed and unrecorded, the sculpture itself lacking subtlety and depth. As Elton [1991, p. 7] points out with regard to the truth, “we know that we shall never see it all or see it in ways that prove totally convincing to everyone.”

This section has outlined the emergence of accounting as one of the “great agencies of quantitative impersonality” [Porter, 1994, p. 40] and the similar trends in the evolution and elevation of history in the 19th and early 20th centuries. However, the 20th century saw considerable change in social structures and intellectual attitudes. The following section discusses the potential erosion of the “output” of history and accounting in the light of uncertainty and the emergence of other sources of information.

HISTORY, ACCOUNTING AND THE SUBJECTIVITY OF SCIENCE

Evans [1997, p. 37] comments that a “reassertion of historical objectivity came at a time in the 1950s and 1960s when the historical profession was re-establishing itself, undergoing slow

but steady growth, and recapturing the social and financial position it had enjoyed in the late nineteenth century". Similarly in accounting, a number of papers dealing with objectivity and measurement in accounting were published in the early 1960s [Arnett, 1961; Burke, 1964; Chambers, 1964; Ijiri and Jeadicke, 1964]. "Neutrality", it was argued, was the key prerequisite in dealing with historical and accounting evidence.

This sense of science in history and accounting then came under attack. The last two decades have seen a revolution in historiography as history attempts to portray a broader view of the past and as the hegemony of history as an explanation of the past and present is challenged by other disciplines. Canny [1998, p. 55] complains that "the property of the past has been taken over by people in other disciplines": the questioning of history came from sociology, philosophy and literature and the emerging postmodernists therein [see, for example, White, 1973 and Iggers, 1999]. Ironically, these were some of the very groups from which von Ranke wished to distinguish historians more than a century earlier (and, furthermore, the neo-Weberian sociology which affected history in the 1960s first did so in Germany). As a result, "the old models of historical science, which dominated historical scholarship in the nineteenth and well into the twentieth century, have in recent decades been increasingly regarded as inadequate" [Iggers, 1979, p. 4].

Indeed, the increasing rigidity of the scientific approach alienated many. By the 20th century, a much broader interpretation of history was emerging amongst, for example, French historians of the *Annales* School who "wished to enlarge the dimensions of historical investigation" and those with Marxist perspectives who "dealt with the totality of society moving through time" [Parker, 1979b, p. 423]. Such developments are linked to the recognition that history, as language and text, is a product of its time, place and the historian him or her self [White, 1978]. Thus, "modern historical consciousness comprises two elements: an awareness of the disparity in circumstances and mentality which creates a gulf between all previous ages and our own, and a recognition that our world owes its distinctive character to the way it has grown out of those past circumstances and mentalities" [Tosh, 1991, pp. 14-15]. In order to broaden one's range it is necessary to examine the history that lies beneath the past.

In the face of such change, Stone [1991, pp. 217-218] provocatively proclaimed that "history might be on the way to becoming an endangered species", sentiments echoed in J.H.

Plumb's [1970] *The Death of the Past*. Earlier, Stone [1965] had suggested that new history demanded more than sources alone as "social groups do not leave corporate records" [Tosh, 1991, p. 101]. History has, therefore, not maintained a narrow focus. Historians realize that many groups have been ignored in traditional historiography [Hobsbawm, 1997]. Marwick [1989, p. 134] remarks how an interest "in the symbolism of ordinary life has advanced unabated". The growth in gender and ethnic history are but two examples of the desire to examine those who were often powerless in the past [Evans, 1997]. This approach argues that for too long history has been the preserve of an *élite* [Carr, 1987].

These historical pictures painted on a wider canvas also reflect the changes in historiography of the past two decades. The new focus provides a more extensive picture of the past. The emergence of social history necessitated a new perspective as, frequently, the "common people" left no documents behind. Social history, wrote Trevelyan [1944, p. vii], "might be defined negatively as the history of a people with the politics left out". This history emphasized the individual as family member, worker and consumer in contrast to the history of "big men", high politics and institutions.

Furthermore, the categorization of history as science or, alternatively, as belonging wholly in the humanities has been questioned by, for example, Tosh [1991] and Hobsbawm [1997]. As a branch of the humanities history is presented as a guardian of the past. An alternative view, that of social science, suggests that history cannot only be a depository of the past but that it can also (like economics and sociology) suggest solutions for the future. Moreover, a characterization as social science reshapes its processes and introduces a broader context to historical reflection.

This change in history has parallels in accounting history. Perhaps the most significant shift in the focus of inquiry of accounting history in recent years has been the emergence of a number of studies belonging to a prominent body of work commonly classified as the 'new' accounting history [Miller *et al.*, 1991]. Miller *et al.* [1991] argue that this characterization of 'the new accounting history' is justified by the more prominent role which accounting history has played within the accounting discipline during recent years and the different focus and scope of this work to that which has been traditionally adopted in accounting history. A characteristic of this new approach is its interdisciplinary nature.

In marked contrast to the somewhat prescriptive statements on accounting history issued by the AAA's Committee on Accounting History [1970], Miller *et al.* [1991] define no theoretical boundaries within which historical accounting research must be based, nor standard methodologies to which all research must be ascribed. Accounting history, they claim, should not be viewed simply as some natural evolution. The new accounting history sees accounting as being formed by many complex, diverse and changing issues over time [Miller *et al.* 1991, p. 396].

Crudely summarizing the transition within accounting history, similar to changes in the discipline of history itself, a shift has occurred away from the antiquarian approach of meticulous recording of dates and consecutive events, the construction of a rational evolution of technique on the path to economic progress and a descriptive, atheoretical narrative, to a broader contextual approach which recognizes discontinuities and partialities and seeks to embrace complexities in gaining a deeper insight into the role of the accounting craft. Postmodern thinking has proved to be illuminating in exploring the context of accounting change as reflected in the work of, for example, Loft [1986], Hoskin and Macve [1986 and 1988] and Miller and O'Leary [1987]. Furthermore, as in many "sub-fields" of history, postmodernism and specifically the work of Foucault has "been a critical force in moving certain of these subfields from the remote margins to the very centre of historians' concerns" [Goldstein, 1994, p. 1]: "accounting history has moved closer to the centre of accounting research" [Oldroyd, 1999, p. 84].

The extension of the boundaries of accounting research has raised reactions amongst accounting academics similar to those recently experienced within the historical community. Tyson [1993 and 1995], critical of the theory driven approach of new accounting history, claims [1993, p. 5] it "may inspire studies that obscure the distinction between opinion, interpretation, and factual truth, or more simply, between philosophy and history". Whittington [1995] suggests that accounting is in danger of becoming "too interesting", reminiscent of Elton's more vociferous comments regarding the "malevolent influences" of social science on history [Elton, 1986]. History needs "more kings and queens" and less of the "non-existent history of ethnic entities and women" [Elton, 1984, p. 18]. These "non-existent histories" are defined out of existence by historical methods themselves: they are deemed not to exist because they leave few documents behind which history defines as worthy of record. They exist in

the same way as goodwill and human assets exist in the business environment: extant but “unreliable” and, therefore, in the guise of objectivity, unrecorded and unrecognized.

Conventional perspectives of accounting practice also came to be questioned in the 1960s. In financial reporting, a number of corporate collapses exposed the limitations of accounting regulation while market-based accounting research, such as that of Ball and Brown [1967] and Beaver [1967] questioned the “usefulness” of accounting information to the users of financial statements. In management accounting, the work of Anthony and Dearden [1980] and, later, Hopwood [1983] undermined the one-dimensional use of numbers as measures of performance. Further developments in the 1980s (for example, Johnson and Kaplan, 1987) saw the emergence of deeper questions concerning the relevance of management accounting information.

The conceptualization of financial accounting also came under attack once more with further corporate collapses and evidence of “creative accounting” [Smith, 1996; Griffiths, 1987]. The acceptance that earnings per share as a single number does not capture the complexity of business performance led to the presentation of comprehensive income and the disaggregation of the reporting of profitability. In the US, Management Discussion and Analysis and, in the UK, the Operating and Financial Review reflect the increasing perception of the inadequacy of quantification alone by suggesting that the discussion accompanying the annual report “should contain analytical discussion rather than merely numerical analysis” [Accounting Standards Board, 1993]. In managerial accounting, Kaplan and Norton’s balanced scorecard is based on “the premise that an exclusive reliance on financial measures in a management system is insufficient” [Kaplan and Norton, 2001, p. 87].

The increasing influence of sources of information other than those regulated through the annual report led to the regulation of information disseminated through other media (see, for example, the Securities and Exchange Commission’s fair trading regulations and efforts to regulate analyst commentary on the public media). The future role of accounting itself has been increasingly questioned in the US [see Institute of Management Accountants, 1994, 1995, 1999; Albrecht and Sack, 2000], in the UK [Beattie, 1999] and elsewhere. While the significant status of empirical accounting research continues to be reflected in major international journals such as *The Accounting Review* and *The Journal of Accounting Research*, some of this research raises important issues regarding the increasing inadequacy of

contemporary accounting measurements (see, for example, Lev as interviewed in Stewart [2001, p. 187]).

Alongside Hopwood's [1983] recognition of the need for detailed investigation of accounting's organizational and social context, there was increasing advocacy of qualitative research methods as a rich alternative to the conventional scientific model. At the heart of the concerns raised during this period was a belief that academic accounting research was becoming more distant from accounting practice [Hopwood, 1983; Tomkins and Groves, 1983]. Adherence to a quantitative mode of scientific inquiry within the discipline was criticized for this past academic neglect [Hopper and Powell, 1985; Chua, 1986]. In contrast, more qualitative research was advocated. The traditional scientific approach which was characterized by an exhaustive use of quantitative methods increasingly came under attack: "The research model becomes a substitute for intimate knowledge of the field being studied", argued Tomkins and Groves [1983, p. 363]. Viewed as inadequate in capturing the rich social fabric of accounting's role in an organizational setting, alternative qualitative-based research agendas were advocated.

Both historians and accountants have discovered that "when it came to the really big issues in history, it had to remain silent, because they could not be solved by quantitative methods" [Elton in Fogel and Elton, 1983] and that the pursuit of truly scientific accounting is, like the pursuit of truly scientific history, "a mirage" [Evans, 1997, p. 41]. Hence, "the accountant is indeed someone who is capable of *making* the accounts as well as recording them" [Hopwood, 1994, p. 299]. In history, "the deconstructive turn in contemporary thought [sees] history not as a record of the past, more or less faithful to the facts, [but] as an invention, or fiction, of historians themselves" [Samuel, 1992, pp. 220-221]. As Hines [1992] suggests in the accounting context, "in communicating reality, we construct reality".

CONCLUSION

This paper has explored the scientific conceptualization of history and accounting, contributing fresh comparisons and contrasts between change in history and accounting. It has highlighted similarities in the 19th and 20th century experiences of professional history and professional accounting. These conclusions potentially offer research opportunities at the intersections between history and accounting. Such research could include

the nature of evidence and judgment in history and accounting as well as how such judgments are used in the construction of contestable, historical reality in both history and accounting. In that context, the contrasting attributes of attestation in history and accounting are also worthy of exploration.

The professionalization of history may be characterized by von Ranke's argument that history attempts to represent "the inner being of the past" [Evans, 1997, p. 17]. Accounting, similarly, struggles to portray the "substance of transactions" [Accounting Standards Board, 1994]. Hence, both professions have adopted the role of reporting "reality" in differing domains — the accounting domain a limited one, the history domain a wider one. The claims of historians, in particular, to professional status have their origins in the portrayal of history as a scientific discipline, an angel of rationality above the passion of patriotism and the interplay of sectional interests. While these claims are less acute in accounting, its method nonetheless exuded an aura of exactitude and objectivity, a sense of certainty surrounding single numbers. This scientific angle of rhetoric rendered both history and accounting exclusive in method, drawing on documents and transactions and leaving many elements of the less tangible world unwritten and unread. In doing so, they found fertile ground in the emerging respect for science in the 19th century while sowing the seeds of their own decline in a 20th century increasingly suspicious of the claims of science.

The hygienization of history and accounting in the early stages of their professionalization left them sterile, their propagation as "cults of impersonality" [Porter, 1995, p. 90 in reference to objectivity in accounting] left out rich and diverse elements of the reality they attempted to portray. In limiting the field of inquiry and mapping the landscape by means which were ostensibly objective ones, both history and accounting left much of the terrain unmeasured and unrecognized and open to the inroads and explorations of other disciplines. As we enter the 21st century, the challenge facing both history and accounting is how to record and represent an increasingly complex "reality", significant elements of which are not necessarily discovered in documents or measurable by traditional means.

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TAXATION, ACCOUNTING AND REDISTRIBUTION

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Mahmoud Ezzamel
CARDIFF UNIVERSITY

ACCOUNTING AND REDISTRIBUTION: THE PALACE AND MORTUARY CULT IN THE MIDDLE KINGDOM, ANCIENT EGYPT

Abstract: This paper examines detailed historical material drawn from primary sources to explore the role of accounting practices in the functioning of several key stages of the redistributive economy of the Middle Kingdom, ancient Egypt. First, the paper attends to the role of accounting in securing a regular flow of commodities to the state, in the form of taxation in kind. The historical material suggests clearly that accounting practices played a crucial role in levying and collecting precise tax liabilities, and in monitoring the storing of commodities in state granaries and storehouses. The second level of analysis is concerned with the role of accounting in coordinating the outflow of commodities to consumption units focusing on two examples. The first relates to the role of accounting in the distribution of food provisions to members of the Royal family and palace dependents while on a journey; the second examines the role of accounting in the writing and execution of a series of contracts to promote the mortuary cult of a dead individual. In both cases, the paper argues that the accounting practices were linked strongly to the social, political and economic contexts within which these accounting practices functioned.

INTRODUCTION

This paper is part of a larger project that seeks to contextualize the emergence and functioning of accounting practices in ancient Egypt. Earlier work by the author has focused upon the development of the scribal occupation [Ezzamel, 1994], the use of ancient systems of human accountability in bakeries [Ezzamel, 1997], the assessment and collection of taxes

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[Ezzamel, 2002a], the relationship between accounting and the development of monies of account [Ezzamel and Hoskin, 2002], and accounting for private estates and the household [Ezzamel, 2002b]. Work in progress extends this analysis to the domain of royal (funerary) and divine (memorial) temples [Ezzamel, 2002c, 2002d]. In contrast, this paper seeks to examine the relationship between accounting practices and the functioning of some important sectors of the state-controlled economy in Middle Kingdom ancient Egypt.¹ My focus here will be upon the economic activities of the palace which, by the New Kingdom, became the most dominant sector in the economy. I restrict my analysis to those activities that could be conveniently grouped under the term “redistributive economy” thereby focusing upon the relationship between accounting and the economic activities of the state in antiquity. While this paper has some minimal overlap with an earlier study [Ezzamel, 2002a] there are a number of crucial differences. First, the current study charts accounting practices during the Middle Kingdom whereas the earlier study is concerned with the much later, and more contextually different, New Kingdom. Secondly, the paper contains interesting details on tax estimation/planning not contained in the earlier study. Thirdly, this contribution focuses on the redistribution of commodities to palace and temple dependents, an issue not covered in the earlier study.

Minted coins were not known in ancient Egypt until after the conquest by Alexander [Lloyd, 1983], and before then grain was one of the standard measures of value (money of account) for different commodities [Ezzamel and Hoskin, 2002].² Hence, the economy of ancient Egypt has been systematically described as a “grain economy”. Indeed, as long ago as 1896, Weber [English translation 1976, p. 41] recognized the crucial importance of grain to ancient Egypt “the ‘store-house’ policies of absolute states, even that of Russia (where they were most developed) were hardly comparable in importance to those of the

¹ Ancient Egyptian history is typically divided into the Pre-dynastic and Dynastic eras. The Dynastic era is further divided into the Early Dynastic Period (3300-2700 B.C.), the Old Kingdom (2700-2200 B.C.), the Middle Kingdom (2050-1780 B.C.), the New Kingdom (1552-1080) and the Late Dynastic Period (1080-332 B.C.). The latter four periods were interspersed with Intermediate Periods, each lasting a considerable number of years.

² A modern parallel for the use of a standard measurement scale in an unmonetised economy is beaver pelts used by the early traders of the Hudson Bay Company (Spraaakman and Wilkie, 2000).

Babylonian and Egyptian grain storage systems". In broad terms, the palace-based grain economy entailed crop collection [Ezzamel, 2002a] and its subsequent redistribution. In ancient Egypt, redistribution covered several activities. First, providing for the immediate needs of the palace and its dependants. Secondly, provisioning for priests, temple workmen, and workmen engaged in state projects. Thirdly, provisions and gifts offered in festivals. Fourthly, supplying a minimum sustenance for the population particularly during periods of economic hardship (e.g. low Nile levels).

Using material drawn from complete translations of original sources, this paper examines the roles played by accounting practices in both mediating and rendering some of these redistributive activities possible. While tracing economic activities involving grain will form an essential part of my investigation, economic activities involving provision of different goods such as other foodstuffs (e.g. meat, oil) and clothing will also be considered. The next section provides a brief sketch of the historical and socio-economic settings of the Middle Kingdom in order to contextually locate the accounting practices examined in the paper. The role of accounting in mediating and monitoring the inflow and outflow of commodities is considered within the context of Egypt's redistributive economy. In examining the outflow of commodities the initial focus is on those that involve the palace and its various dependants. The penultimate section deals with a different type of redistribution; that involving the temple, which as I argue below, was a critical part of the state economic apparatus. The final section examines the broader implications of the historical material discussed here for the role of accounting practices in the Egyptian society of the Middle Kingdom and draws together the main conclusions.

A variety of accounting practices were developed and employed by the scribes to underpin, indeed make possible, the functioning of ancient Egypt's redistributive economy. Accounting practices were at the center of all the critical stages that involved bringing commodities to the center as well as redistributing these commodities to the various centers of consumption. In their detail, accounting calculations identified centers of responsibility for taxable income, estimated taxable capacity, levied precise tax liability, and ensured the collection of levied taxes and their careful storage until they were redistributed as rations or wages. A system that both enumerated the precise types of goods and assessed their value either through quantification via capacity measures or through the use of a money of

account as a common denominator was used to endow the measurements with precession. Even when dealing with the mortuary cults of the dead, this accounting precession was mobilized to ensure that an accurate measure-for-measure equivalence was at work. It is argued below that, far from being an inferior, and simplistic precursor to modern accounting, this ancient accounting should be judged on its own terms and understood within the unique social, political and economic contexts in which it functioned.

The analysis in this paper suggests that even at this early juncture in human history, accounting practices mediated and were in turn mediated by, the social, political and economic contexts of the Middle Kingdom. This has parallels in Mesopotamia, the other writing culture of the time, where accounting practices both mediated and were mediated by the social, political and economic contexts of that ancient civilization [Schmandt-Besserat, 1992; Nissen, *et. al.*, 1993; Ezzamel and Hoskin, 2002]. In Mesopotamia too, accounting practices played a key role in facilitating contracts and economic exchange. Such parallels at least hint at the possibility of the timeless character of this aspect of accounting.

THE SOCIO-POLITICAL, ADMINISTRATIVE AND ECONOMIC SETTINGS OF THE MIDDLE KINGDOM

The Middle Kingdom period of ancient Egyptian history was characterized by socio-political, administrative and economic contexts significantly different from those of the Old Kingdom. The Old Kingdom exhibited high stability, self-assurance and very powerful centralized governments. The authority of the Pharaoh during the Old Kingdom was virtually unchallenged. Then around 2180 B.C. came the unexpected; the collapse of the Old Kingdom that resulted in state disunity and chaos, known as the First Intermediate Period, which lasted for about 130 years [Wilson, 1951; Gardiner, 1961; Grimal, 1992; Kuhrt, 1997]. A measure of the problems encountered during this period may be gleaned from The Admonitions of Ipuwer [Simpson, 1972, pp. 210-229; Lichtheim, 1975, pp. 149-163], which, although of a more literary than historical significance, are extraordinarily insightful. The Sage laments the weakness of the state, caused in no small part by the inability to collect taxes which left state coffers virtually empty:

Lo, Yebu, [This] . . . are not taxed because of strife . . .
What good is a treasury without its revenues? . . . See

now, the land is deprived of kingship by a few people who ignore custom . . . See, the mighty of the land are not reported to . . . The king's storehouse is 'I go-get-it', for everyone, and the whole palace is without its revenues [Lichtheim, 1975, pp. 152-159].

At the end of this traumatic period, Egypt was re-united again and the Middle Kingdom was born. What is at times lost in the midst of concern with the anarchy and social upheaval referred to above is that, almost paradoxically, the First Intermediate Period provided the foundations for the unique civilization of the Middle Kingdom and its fundamentally different mode of government. As Wilson [1951, p. 105] has remarked, "we can see the period [The First Intermediate Period] as being the formative time of the classical Egyptian literature, with a productive literary movement of considerable vigor." These literary works are immensely important in explaining the form of government and administrative arrangements that emerged in the Middle Kingdom.

Responsibility of Government, State Bureaucracy, and the Economy: In contrast to the Old and New Kingdoms, Egyptologists typically ascribe to the Middle Kingdom a weaker and more decentralized government. The chaos which permeated the First Intermediate Period was not totally eliminated during the early years of the Middle Kingdom, as evidenced by the continued existence of provincial governors of considerable influence [Kemp, 1983, pp. 110-111]. Wilson [1951, p. 106] has also suggested that the Middle Kingdom "was at first very decentralized and has justly been called a "feudal" state. The tight control of the Pharaohs of the early Old Kingdom could not be regained." However, this is an over-simplification as some Pharaohs of the Middle Kingdom established a fairly powerful state underpinned by competent and innovative administrators (see below). Moreover, it was during the Middle Kingdom that a most important development, from the perspective of this paper, emerged in the form of more systematic and detailed bookkeeping [Kuhrt, 1997, p. 162] on a level not paralleled before in ancient Egypt. Despite the relative weakening of central authority, there remained a paramount expectation that the Pharaoh, at least in theory and most often in practice, protected, and provided for, his subjects and secured social justice. The ideal of social justice was rooted in the concept of *Maat*, which implied truth, justice, righteousness, and order not only among humans, but also between them and their gods, and

between the living and the dead [Hart, 1986; Lichtheim, 1992; Watterson, 1996].

In the Middle Kingdom, the Pharaoh relied on four crucial functions; the Vizierate, the Treasury, the Priesthood, and the Military. These functions were attended to by a large number of officials, with the Vizier immediately below the Pharaoh, followed by officials, courtiers, locals and semi-officials, all with varying status within the hierarchy [Quirke, 1990]. Each town was governed by a provincial official (mayor, town governor) who was also responsible for delivering taxes to the Vizier. Hence, responsibility for civil government during the Middle Kingdom cascaded gradually down a clearly defined hierarchy [Kemp, 1983]. The stable periods of the Middle Kingdom were characterized by a quest for structure and order effected through careful planning [David, 1986; Kemp, 1989]. Residences in large towns were redistributive sub-centers, upon which a significant proportion of the town population depended. A basic modular organization of society, where the population was divided into several distinct groups was used to spread urbanism and bureaucratic control into various parts of the country; despite the decentralized form of government, this model:

... reflects the prevailing mentality of the Middle Kingdom, which tended towards an extreme structured view of society, apparent both in an inclination to devise arithmetic calculations for every facet of economic life, and in the attempts to control human behaviour and property by means of a strict bureaucratic framework [Kemp, 1989, p. 155].

The economy of ancient Egypt was a combination of two spheres: a local subsistence and a nation-wide redistributive system. For the majority of ancient Egyptians, a household economy, or *oikos*, developed at the local level where one produced mainly for oneself. Ancient Egypt also developed an elaborate redistributive system. At the end of the production or trade cycle subjects delivered the crop to government centers (if they were working for the state) or paid direct taxes (if they were working for themselves). Although the bureaucracy was aimed at supporting and reproducing the monarchy, the social system in ancient Egypt exhibited clear elements of a patriarchy that was perceived to ensure the protection of its subjects.

These administrative arrangements echo those identified by Polanyi [1944, 1947, 1977] as characteristic of redistributive economies. Although trading in local markets existed [Janssen,

1975] no market price mechanism was developed; rather, the economy was regulated in the main via the administrative machinery. A significant measure of centricity (i.e. goods flowing into the center and out of it again) was established to facilitate the operation of state bureaucracy, but the system was not monolithic. The palace played a major role in administering the economy, but it was supported by a complex network of pious foundations or religious institutions. Each of these foundations enjoyed a quasi-autonomous status, and each was involved in collecting and storing revenues, and in distributing them in the form of rations or wages [Kemp, 1989]. In summary the economic resources of ancient Egypt divided into three domains: the Crown, the temple, and the private.

It would be misleading to suggest that the Middle Kingdom was a monolithic period with essentially the same economic, political and social attributes. Because of diversity within each of these domains, Egyptologists have divided this period into an 'early phase', beginning with the start of the Middle Kingdom in 2050 B.C. to the end of the reign of Senusret II around 1878 B.C., and a 'late phase' beginning with the reign of his successor Senusret III to the end of the Middle Kingdom at about 1780 B.C. This discontinuity corresponds to the latter half of the Twelfth Dynasty onwards, which is the era from which is drawn most of the historical material examined in this paper. That such division is important has been underscored by Quirke [1990, p. 2]: "The division of the Middle Kingdom into 'early' and 'late' phases covers material culture and textual expression, and therefore represents a substantial change in which political motives need not have played a primary role."

The discontinuity occurred when Senusret III embarked on his Nubian campaign. Seeking to secure Egypt's southern borders, he had a channel cut at the First Cataract (near Egypt's southern borders with Nubia) to allow navigation during low Nile levels. This led effectively to the "creation of a new Egypt in the form of a navigable Nile from the Second Cataract to the Mediterranean." [ibid., pp. 2-3]. But such extension of the Egyptian borders was not only of political significance; it also had strong economic implications, for it rendered easier the development and monitoring of economic activities throughout Egypt. As Quirke [ibid., p. 2] has put it "Although invisible, the order of economic relations and patterns of transport and communication are transformed at a profound level by the Nubian policy of Senusret III. The policy may be considered both a product of the trend towards greater precision and a major factor for change."

This decisive break was accompanied by major administrative changes. Although some of these changes may have their genesis in the early Twelfth's Dynasty, they took more definitive forms during the reign of Senusret III. Many tasks became defined in more concrete terms, as reflected in new administrative titles and expressions for permanent official positions. Previous titles with fairly broad mandates became far more specific, and some completely new title designations were invented. Indeed, James [1985, p. 51] has argued that "during the Twelfth Dynasty a complete reorganization of provincial administration was undertaken by King Sesostri[s] [Senusret] III. As a result, the old system of hereditary nomarchs was destroyed and replaced by a bureaucratic machinery, the operators of which owed their allegiance to the king in his residence". Even though Quirke [ibid., p. 3] is probably correct in stating that "The innovations may not amount to new methods of operation so much as represent a more exact embodiment of existing practice", the critical point here is the formalization of such practices into specific, carefully defined titles. What looms large here is the visible hand of the administration reproducing and reaffirming itself through the further writing and propagation of administrative titles.

The scope of the current paper does not permit a full analysis of the formalisation of refined, more specific administrative titles in late Middle Kingdom [see Quike, 1990]. Suffice it to list some examples of these titles: Interior Overseer of the Inner Palace; Scribe of the Outer Palace; Scribe of the Fields; Treasurer; Deputy Treasurer; Trusted Sealer; and Servant of the Treasury Steward. The use of these, and other titles, was an addition to titles inherited from the early Middle Kingdom and the Old Kingdom, such as Vizier; Deputy Vizier; and Mayor. However, while such delineation of narrower definitions of tasks and titles promoted a much clearer distinction, specialization, and clarification of lines of responsibility and accountability, one major limitation is the potential increase in administrative rigidity. As Quirke [1990, pp. 80-81] has observed, to minimize this limitation, the senior administrators of the late Middle Kingdom also made use of non-specific titles. We will witness some of this administrative genius in relation to different types of titles when the summary accounts of Papyrus Boulaq 18 are examined later. Below, however, I intend to explore the roles of the palace and the temple in the redistributive economy of the Middle Kingdom. At this point, it will suffice to say that this 'administrative revolution' has been interpreted by James [1985, pp. 136; see also Ezzamel, 1994] as the main cause underlying

the massive expansion in the number of scribes during the Middle Kingdom:

The strong, centralized, regime of the Twelfth Dynasty generated the settled circumstances in which fine work was produced, including handsome sculpture, relief-work, and hieroglyphic inscriptions. The same circumstances produced a development of bureaucracy accompanied by a great increase in written documents. Greater scribal activities meant more scribes; the training of more scribes required more scribal schools, and an attention to scribal practices which had not been needed in earlier times.

The Redistributive Roles of State Institutions: The palace developed a number of organizations, including the granary as an important part of the treasury, to help administer the redistributive economy. Granaries were built throughout Egypt, and, as in the case of the town of Kahun, each of the granaries in the eight large houses had a substantial capacity. Thus, it has been estimated that the eight granaries would have stored grain sufficient to support a population ranging between 5,000 and 9,000 (using maximum and minimum rations respectively) for a whole year [Kemp, 1986, p. 133]. It is likely that other individual granaries from the same period were much larger. For example, the granary of the military fort at Askut was estimated to have occupied 22% of the total area of the fort, with a capacity of over 1,632 cubic meters which is sufficient to provide annual rations for a minimum of 3,264 and a maximum of 5,628 people [ibid., pp. 131-133].

Apart from grain, the treasury was concerned with metals, cattle, and other agricultural products such as flax. In addition to the treasury, the labor bureau, the waret, the butler, the state workhouse (or the registering house), the Vizier, and the scribes all played important roles in the functioning of the redistributive system. This would have included organizing the supply side (the inflow of goods) and coordinating the demand side (the outflow of goods). The overall redistributive system was finely tuned to take into account special needs or shortages so that the contribution from each source was revised occasionally, and buffer stocks from state granaries were released to meet shortages in specific locations.

The temples of ancient Egypt drew on regular food offerings many of which derived from productive resources owned by them. These offerings ranged from durable wealth, such as

precious metals, to permanent sources of revenue such as cultivatable land. The temples also had their own labor force, many of them renting land at a rate of 30% of the crop. Other offerings included access to mineral resources, animal herds, fishing rights, vegetable beds, vineyards, and beehives. Significantly, Kemp [1989, p. 193] has observed: "The temples offered secure storage and administration and, perhaps even more important, a receipt in the form of texts and scenes displayed in the temple which recorded the gift as a great deed of pious generosity".

In this paper, the temple is treated as a branch of the state [see Kemp, 1989]; indeed, a symbiotic relationship ensued between the two. As Janssen [1979, p. 509] has remarked, the depiction of the Pharaoh in every temple in the land as the real high priest "was not only an expression of a dogmatic theory, but also of the actual economic reality. The temples together with all their property were at the disposal of the Pharaoh". The status of the temples was rooted in the overall ideology of the state; within the economic context they served as state institutions, and were subject to frequent state intervention particularly in terms of their economic endowments. Yet another demonstration of the economic integration between the temples and the state is the bureaucracy that developed within each of these domains. The system of administration was simply a collection of royal decrees which were updated and revised to cope with emerging complaints which were handled through a cycle of decision-petition of complaint-redress [Kemp, 1989]. Further, in many cases temple overseers were laymen attached to other state services, and the necropolis workmen (a state body) were frequently given food provisions by the temples. Some scholars have even suggested that the temples were repositories for the revenues from the empire [Redford, 1976], and that "major temples were the reserve banks of the time" [Kemp, 1989, p. 195], an analogy that has to be treated with caution.

Being a branch of state administration meant that the temples paid no taxes. Similarly, the often observed large temple holdings of landed property should be viewed in terms of the temple role as an organ of the state. Temple revenues were typically spent on three main items: building and restoration projects; upkeep of the temple priests; and offerings for daily rituals, monthly feasts, and annual festivals. A tradition of 'Reversion of offerings' [Kemp, 1989, p. 193] was followed according to which offerings presented to the gods were initially taken before statues of lesser cults, and subsequently used to pay for temple overheads; such as payments in kind to priests and as

wages to workmen. The large temples also had their own merchant ships for the purposes of both domestic and international trade. Traders exchanged surplus produce, such as grain and linen, for other commodities needed by the temples, such as papyrus rolls.

In summary, the temples produced a surplus of income over and above the overheads required for their own maintenance. Because of the volatility of the Nile levels and other exogenous forces affecting the crop, substantial reserves of buffer stocks were stored in very large warehouses within the temple complex in order to manage peaks and troughs and to smooth out supply and demand.³ In times of political stability, such buffer stocks were used not only to ensure the basic economic subsistence of the Pharaoh's subjects, but were also consumed throughout the country in excessive abundance to underpin the perception of a grandiose monarchy. From an administrative perspective, these buffer stocks served to stabilize the economy over time. This analysis, however, is suggestive of a faultless state apparatus and does not explicitly allow for possibilities of friction or system failure, an issue that is taken up briefly later.

ACCOUNTING AND REDISTRIBUTION: INFLOW OF COMMODITIES

Because ancient Egypt had a grain-economy, concern with monitoring the inflow of grain and other storable goods was paramount. The redistribution of commodities comprised several steps: (i) measurement of commodities at source; (ii) delivery to central granaries and stock control in stores; (iii) conversion of inputs (e.g. grain) into output (e.g. bread); and (iv) redistribution according to predetermined rations. Broadly speaking, steps (i) to (iii) were concerned with the inflow and processing of commodities, whereas step (iv) related to the outflow of commodities from the granaries (in the case of grain) or the state workhouse (in the case of other commodities) to various sectors of the community. Unfortunately, much of the abundant administrative records of the Middle Kingdom have not survived; hence in the following discussion I will only devote attention to those items for which there is satisfactory evidence. It is also worth noting that each of the aforementioned steps

³ For example, the Ramesseum granaries, if filled to capacity, could support a population of up to 20,000 for a whole year [Kemp, 1989].

was underpinned by specific accounting and monitoring practices which were inscribed in writing, mostly on ostraka (shreds of pottery) and at times on papyri, and very occasionally celebrated ceremonially on the walls of tombs and temples. The accounting practices deployed in these steps provide strong evidence of the extent to, and the manner by which, accounting was implicated in the redistributive economy of ancient Egypt. This section focuses on the inflow of commodities. The next section discusses the outflow of commodities.

Measurement at source: Control of the flow of crops in ancient Egypt was rooted in the good management of the land. Specific officials were charged with responsibility for controlling and maintaining the river-banks and the canals, and overseeing the orderly division of land among peasants [James, 1985]. These responsibilities were formalized and articulated further in the 'Duties of the Vizier' [van den Boorn, 1988]. We can safely assume that, as the chief minister, the Vizier had to maintain tight control over the land by dispatching mayors, district governors, and scribes to arrange the cultivation of the land during the summer, fix district boundaries, look into cases relating to estate boundaries, and examine water supplies on the first day of every (ten-day) week. The Vizier was also ultimately responsible for exacting the dues of the temples [see Smither, 1941]. Officials were appointed to monitor work on the land throughout the season, and, as was the case in the Old Kingdom [Kanawati, 1980; Strudwick, 1985], the Vizier kept himself informed through regular reports that covered every state of affairs under his control. Among those helping the Vizier maintain control over the land were the scribes who played a prominent role.

Thankfully, some material from the Middle Kingdom on the role of the scribe in these activities has survived in a rather short, but extremely informative document [Smither, 1941; see Figure 1]. The document is a tax-assessor's journal dating back to the end of the Twelfth/beginning of the Thirteenth Dynasty. Although the document does not contain any tax calculations, it shows the scribal activities leading to the assessment of tax. Before tax was levied on the harvested crop, the land was surveyed and the standing crop was measured. In performing this task, the scribe assessing the tax burden typically sought to demonstrate to all concerned his fulfillment of the spirit of *Maat* by ensuring that his assessment was fair. Such a quality was frequently celebrated in the autobiographies of the Middle Kingdom. For example, the scribe Dhwty-nakt-ank stated in his

FIGURE 1
Tax Assessment

1. Receiving Senebteyfey
The clerk of land
" " " " Seneb
The envoy of the steward Hōr [i]
- 5 The stretcher of the cord Satpēhu
The holder of the cords Ibi
Year 2, SECOND MONTH OF INUNDATION, DAY 15
" " " " DAY 16
" " " " DAY 17
10 " " " " DAY 18
" " " " DAY 19
- (12) Spent in measuring (?)
with the clerks of land of the
Southern District.
- Year 2, SECOND MONTH OF INUNDATION, DAY 20.
SPENT assessing for him (?) the dues in the Office of Land of the Northern District,
[and]
- 15 REGISTERING IN THE OFFICE OF THE TREASURER OF THE KING AND
OVERSEER OF LAND OF THE NORTHERN DISTRICT REDNYPTAH.
- LIST OF THE NAMES OF THE CLERKS OF LAND WHO ARRIVED FOR THE REGIS-
TRATION ON THIS REGISTERING DAY.
- THE CLERK OF THE *Tema* AND CUSTODIAN OF THE REGULATIONS, PAENTYNEY
The clerk of land Senebteyfey
" " " " Seneb
- 20 [The envoy] of the steward Hōri
The holder of the cord Ibi
The stretcher of the cords Satpēhu
Year 2, SECOND MONTH OF INUNDATION, DAY 21
" " " " " DAY 22
" " " " " DAY 23
- (26) Spent [assessing for him
(?)] the dues in the Office of
Land

Source: Smither, 1941 pp. 74-75.

autobiography: “I have done rightness in my conduct, when I probed the heart and assessed a payer by [his] wealth, doing what is praiseworthy for every person, known and unknown without distinction” [Lichtheim, 1992, p. 28]. Although this should not be taken to mean that justice and fairness were always observed in practice, these moral and social expectations are likely to have acted as a strong disincentive for scribes to exploit, falsify and deceive when assessing tax burdens.

The tax scribe was accompanied by other officials; the clerk of land, the envoy of the steward, the stretcher of the cord, and

the holder of the cords. The clerk of land was deemed the 'custodian of the regulations' relating to land registry. He ensured that land boundaries were observed. The envoy of the steward took 'internal' measures of the land and the crop on behalf of the steward. The stretcher of the cord and the holder of the cords took measures of the standing crop. Hence, all these officials, while not explicitly called scribes, performed scribal-like duties pertaining to the assessment of taxable crop. One may presume that these officials sought to calculate how much tax to assess, given the uncertainties concerning the Nile inundation, as seems to have been the practice in Roman Egypt [Brunt, 1981], thereby pointing to the possibility that accounting was used to underpin government planning in the Middle Kingdom. These officials may have also worked to some previously determined crop ratio as a function of size and quality of cultivated land to derive advance estimates of taxable crop. Similar practices have been observed in the New Kingdom [see Ezzamel, 2002a].

While lacking concrete supportive evidence, these meticulous procedures suggest that measures of the standing crop may have been compared against the assessed harvest later on in order to ensure accurate assessment of taxable crop. Somewhat less accurate, but fairly pragmatic, markers (for example, the number of canals, lakes, wells, and trees of an estate, [Kemp, 1983, p. 82]) were used to estimate the size of expected crop. These activities were carefully documented and reported to higher offices as a means of feedback on scribal activities 'in the field'. In examining the tax-assessor's journal shown in Figure 1, Smither [1941, p. 76] noted that "[The scribe] made brief entries of how he spent his business hours and the names of those who worked with him. It is likely enough that officials who traveled on Government business were required to make a return to the central office of how they spent their time". Indeed, there is concrete evidence to indicate that written performance reports were submitted by subordinates to superiors on completion of tasks, as in the case of phyles working on state or temple projects [Ezzamel, 2002e].

Tax Levying and Collection: Once measurement of the harvest was completed, recorded and checked against estimates based on standing crop, tax liability was calculated by the scribe. Another scribe checked the amount of tax proposed against the assessment-lists of the harvest, and then the harvest tax was collected. The scribe whose responsibility was to levy tax on grain was known as 'the scribe of counting grain' [James, 1985,

p. 127]. He noted down on a papyrus or an ostraka a full record of the grain measured so that a definite tax liability could be determined. Measuring vessels, made from wood and bound with leather, of specific capacities were used for this purpose. In the case of grain, these measures reflected some multiple of the *hekat* measure (about 4.5 litres). There are some examples of tax, or dues, levied which come from the reign of Senusret I during the Twelfth Dynasty, a little earlier than the discontinuity that occurred during the reign of Senusret III (Papyrus Reisner II, Section E, [Wente, 1990, p. 43]):

Year 17, second month of the first season, day 8

It is the city prefect, vizier, and overseer of the six great lawcourts, Iniotefoker, who commands the stewards of the palace administration who are in the Thinite nome:

You must get yourselves readied and outfit(?) yourselves in accordance with all that I have ordered you, and let there be sent downstream to the Residence 150(?) *hekat*-measures of wheat, and double(?) *hekat*-measure of malted barley, and 10,000 *ter*-loaves from each one of you, since I shall reckon them at the residence. To furnish this wheat in the form of new wheat is something to be attained(?). You shall act so that it is readied. And supply a slave-girl of the labor establishment who is able-bodied [...] of each one of you with(?) him.

Directed by the dog-keeper Montuhotep's son Montuhotep and Imiotef's son Sonbef of(?) the crew of Siagerteb(?).

This administrative order does not specify who the recipients of the message are, but no doubt they were known to those carrying the message. More importantly, these recipients were charged with the responsibility of each providing precise measures of new wheat (150 *hekat*-measures), malted barley (one double *hekat*-measure), 10,000 loaves of *ter*-bread and an able-bodied slave girl. It is not shown how these tax figures were calculated, and it may be presumed that they were based upon previous calculations. But it is clear from the above that the maintenance of the Residence (which was part of the palace complex) required these provisions and levied them in the form of dues on the Pharaoh's subjects. Identification of objects or commodities to be delivered (new wheat, malt barley, *ter*-bread, etc.) was rendered more precise through accounting enumeration in the form of specific quantities measured through the application of the accounting calculus. This calculus invoked

both precise measures (*hekat*, double *hekat*; ter-loaves) and counting to signify tax liability more clearly.

FIGURE 2

Responsibility for Tax Collection

KAHUN, XVI.1.

[Pl. XXI., 11. 21-33.]

21.	Summary of these		Southern corn, hekat
22.	The <i>nâzir</i> , Sa Sebek	A	
23.	The <i>nâzir</i> , Pepa nekhen	moored	892½
24.	The <i>nâzir</i> , Sat(?) kheper	the sahu (?)	537½
25.	The <i>mer khut</i> , Ambu	neter	520
26.	The <i>mer u</i> Nebsekhtu	Iusenb	239½
27.	The <i>sahu</i> , Nenkhemsen		440
28.	The <i>uab her sa</i> , Urneb's son, Senbetfi		368
29.	Total		1020
			401[6½]
30.	Amount of annual taxation (?) of what was given for the fraternity (?) which was in the territory of		5000 (+)
31.	[Paid (?)] from amongst this account		4000 (+)
32.	[Remainder that is to be] given	
33.

Source: Griffith, 1898, p.54.

There is further evidence on final tax assessment and collection from the Kahun papyri [Griffith, 1898] which offers us a glimpse of practices in the Middle Kingdom. Despite the damage to the papyri it is still possible to make some sense of the entries. Papyrus Kahun XVI, 1 (ibid., p. 54), dating from the late Twelfth Dynasty, contains a summary of the number of *hekat* of Southern corn that had to be collected and paid by several overseers (*nâzir*), making a total of 4017½ *hekat* (see Figure 2). Moreover, the entries on lines 30-31 show other amounts of taxation paid from the total outstanding. In this tax document, accountability can be traced directly to every individual overseer or *nazir*, as each has recorded against his name the precise tax liability. Moreover, one type of money of account, that of the *hekat*, was used to quantify tax liability.

Another interesting example relates to the taxation of game. Game keepers had to pay a fixed amount of dues on the stock of

animals and birds they owned or those committed to their care. In those years when their account fell short, they paid less tax with the arrears carried forward to future periods when their stock was higher. Part of a tax account, Kahun LV.4, late Twelfth Dynasty [Griffith, 1898, p. 18] is shown below.

FIGURE 3

Taxation of Fowl

- (43) * (TITLE) *Account of the produce [of fowls (?)]*
(44) List of the produce of 100 [Set]-duck.
(45) Paid to him from among this list,

	(Value of each in Set-duck)	(Number of each)	
(46) <i>Re</i> -goose	8	[3]	(24)
(47) <i>Terp</i> -goose	4	[3]	(12)
(48) <i>Zenzen</i> -crane	2	[3]	(6)
(49) <i>Set</i> -duck (sheldrake?)	1	[3]	(3)
		[12]	(45)

(50) Be subtracted one number; (51) remainder 11. Make thou the excess of 100 (52) over 45: the result thereof is 55. Make thou (53) a repetition of the 11 to find 55: (54) the result thereof is 5 times.

* The numbers in () to the left of the document, as are all the numbers from (50) to (54) at the end of the account designate the number of each line in the original text.

Source: Griffith, 1898, p. 18.

The practice of valuing game stock required the scribes to first inventory and then value the stock of each type of game. As Griffith [1989, p. 18] noted: “The contributions were made not all in one payment, but at intervals during the year, and the scribes had continually to draw up, mentally or in writing, “balance sheets” of the state of the account.” Figure (3) above shows the amount of tax levied on certain types of geese, cranes and ducks. Unlike the previous account of the taxation of corn, where the product is homogeneous, the scribe was faced here with heterogeneous products. These different types of birds are reduced to one common denominator by using the Set-duck as a ‘money of account’ in order to place a value on each type of bird that is meaningfully comparable across all types. The aggregate amount to account for is stated in line (44) as 100 *Set*-duck. The

number of birds inventoried in each category (second column) is multiplied by the relevant value indicator for that category in *Set-duck* (first column) to arrive at the total value of tax (third column; added by Griffith in his translation to make the account clearer). Against the total due of 100 *Set-duck*, only 45 were inventoried, leaving a remainder of 55 *Set-ducks* (line 52). For a reason which remains unclear, the scribe of the account appears to employ yet another denominator, that of 11 to convert the remainder of 55 *Set-ducks* into five times that number of 11 (line 54).

Delivery to Stores and Stock Control: As we have seen above, tax levied was collected in kind and was subsequently delivered to the appropriate state organ. For example, in the case of grain the crop was transported from the threshing floor to the granaries by boat. Accounting control reached far into the innermost parts of ancient Egyptian establishments. Scribal activities were anticipated in the architectural design of granaries, those impressive and administratively crucial structures that functioned as the main arteries of the redistributive system, with rooms designated as their offices. Moreover, considerable accounting expertise was mobilized to: (i) estimate the rations required for a population of varying social order (discussed in more detail below); and (ii) monitor the delivery of grain to, and the distribution of grain from, these granaries. Based on model granaries found in tombs, such as the Meketra models [see Kemp, 1986, 1989] as well as excavated granaries belonging to the Middle Kingdom, it is safe to conclude that each granary had at least eight chambers located in the inner and outer parts of the building. The inner part was used to store grain and the outer part was reserved for the scribes who recorded grain delivered and issued, and who maintained regular stock control.

The Meketra granary models also emphasize the importance of scribal personnel, if not necessarily how their duties were discharged, by showing for each granary model a force of ten staff. These were a doorkeeper, four seated scribes with their document boxes, an overseer and his assistant, and three laborers for measuring grain using the *hekat* measure prior to filling sacks. Concrete evidence from the Uronarti granary (and also from the Mirgissa granary) testify to the extensive use of accounting and administrative monitoring, as over 2100 impressions of “seals of the granary of the fortress of Kheseft-iuntiu” and “seals of the treasury of the fortress of Kheseft-iuntiu” were found in that granary. These seals were used as a method of

enclosing the grain sacks and also for sealing the granary doors [Kemp, 1986, p. 125]. By controlling ration distribution through these granaries, the central administration could exercise direct control over a most significant part of the population. Stock control in the granaries was thus planned in a manner that followed the physical inflow, storage and ultimate distribution of grain.

The preceding discussion could be taken to suggest that the system of accounting for taxation in the Middle Kingdom functioned smoothly and effectively. While in a general way this may have been the case, it would be surprising if system failure did not occur, at least occasionally. In a centralized tax system, one may expect that tax subjects have incentives to engage in actions that would reduce their tax burden, if not evade it altogether. Further, tax officials may collude to appropriate some of the tax collected for their own advantage. The material analyzed in the paper thus far does not allow any conclusions to be drawn about such possible system failure. However, evidence from other eras in ancient Egyptian history points to precisely these possibilities. For example, Ezzamel [2002a] discusses cases of significant defalcations of temple revenues that went on for nine years during the New Kingdom, which involved the collusion of senior priests and scribes. Further, there is also evidence of complaints against scribes levying higher tax burdens on subjects, and subjects using grain measures of differing capacities to minimize the amount of taxable crop (ibid).

Conversion of Inputs into Outputs: In order to monitor the conversion of inputs into outputs, the scribes developed fairly elaborate input-output matrices which involved two types of accounting calculus, both expressed in physical measurements: (i) measures of physical equivalence, and (ii) measures reflecting lack of quality. The first type of measure established unit equivalence between different types of goods and outputs, as for example between barley and emmer, or between different types of birds (see Figure 3), or between bread loaves of different sizes. By using these equivalent units as common denominators, it was possible to establish value equivalence across different products and for items of differing qualities. The best known example of this is the *psw* which reflected the number of loaves of bread or jugs of beer expected to be made from a given quantity of grain after allowing for 'natural loss' in baking/brewing [see Ezzamel, 1997]. Again, this measure made possible the aggregation of products of differing levels of quality.

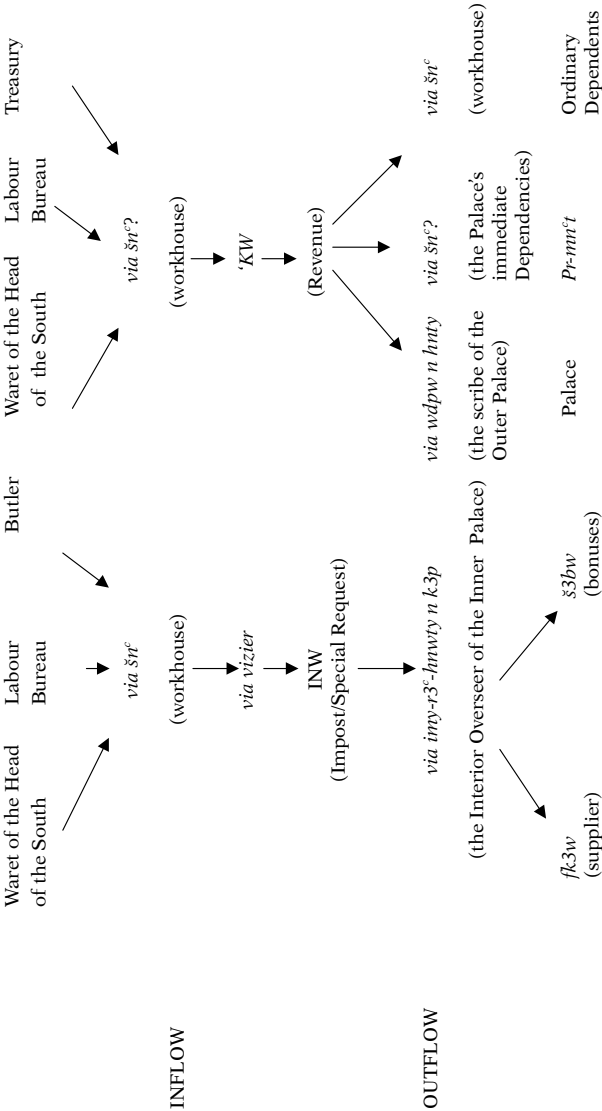
ACCOUNTING FOR THE OUTFLOW OF COMMODITIES

The most simple model of redistribution would involve, first the accumulation of commodities centrally and, secondly their subsequent redistribution to various sectors of society. The redistributive system developed in ancient Egypt was somewhat different from this, in the sense that only part of the harvest (in the form of tax or rent) was collected by the central administration. The precise tax or rent system used had direct ramifications for the various sectors of Egyptian society. Further, when the harvest was adversely affected by exogenous factors, such as Nile inundation or drought, adjustments were made by the central administration through tax reduction/exemption and/or distribution of commodities from the state granaries. This section focuses specifically on situations involving an outflow of commodities from the central administration to the subjects of the state. The pattern of such activities could be quite complex, and, as I argue below, accounting played a major role in making these activities possible. Redistributive activities of the kind described here were based on carefully determined rations and ratios that were deemed appropriate for state employees and direct redistribution to the Palace dependants (such as members of the Royal family, their immediate staff, etc.).

The Summary Accounts: One of the most remarkable documents to survive from the late Middle Kingdom is Papyrus Bulaq 18 [Spalinger, 1985a, 1986; Quirke, 1990], which dates to the early part of Dynasty Thirteen. The Papyrus contains daily summary accounts of a Royal visit to Thebes on the occasion of initiating or completing monuments in connection with the cult of Montu at Medamud [see Quirke, 1990, p. 22]. The Pharaoh was accompanied by his family and immediate dependants, the Vizier, high officials and courtiers of various standing who belonged to the four main administrative functions of the Middle kingdom: the Vizierate, the Treasury, the Priesthood, and the Military. This hierarchy of the social rankings of these officials was reflected in the rations delivered.

Before examining these daily summary accounts in detail, it is instructive to trace the physical flow of commodities recorded in them. In a sense, the commodities which were collected and stored by the administrators of the central granaries and stores assumed another cycle of inflows and outflows of resources in this latter stage of redistribution (see Figure 4). Inflow and out-

FIGURE 4
The Redistributive Pattern of P. Bulaq 18



Adapted from Spallinger, 1986, p 246.

flow of resources took one of two distinct forms [Spalinger, 1986]. First, an inflow of impost from the Waret of the Head of the South, the Labor Bureau, and the Butler, which was channeled through the Workhouse of the Vizier. This was subsequently distributed (outflow) through the Interior Overseer of the Inner Palace, either as supplies or bonuses. Secondly, an inflow of revenue (income) from the Waret of the Head of the South, the Labor Bureau, and the Treasury, channeled through to the Workhouse. This was then distributed via the Scribe of the Outer Palace, and via the Workhouse to the Palace's immediate dependants and ordinary dependants.

Thus, this intricate web of administrative arrangements partitioned the Palace's domain into the Inner Palace (where the Pharaoh and his family and immediate dependants resided) and the Outer Palace (from where the officials, including the Vizier, operated). This partitioning continued to be mobilized in the various economic activities involving the Palace. Orders from the Palace for supplies were issued from the Inner Palace through either the Interior Overseer of the Inner Palace or the Scribe of the Outer Palace to the Scribe of the Accounts operating from the Outer Palace. This manner of coordinating and monitoring requisitions and provision of supplies therefore embodied the spatial zoning and schematic division of the Palace into functionally separate quarters, i.e. the Royal residence in the Inner Palace and the administrative machinery in the Outer Palace [Quirke, 1990].

In total, papyrus Bulaq 18 covers a period of 13 days stretching from day 25 of inundation month two to day four of inundation month three, in addition to days 16-18 of the latter month, in year three of Sobekhotep II (early Thirteenth Dynasty). The entries in the summary accounts are chronologically recorded and classified under four headings [see also Quirke, 1990, p. 23]:

- (i) *Statements of account.* These cover provisions, special deliveries, remainder, balance and surplus.
- (ii) *Orders of provision.* These detail amounts of provision earmarked for specific individuals along with their name list.
- (iii) *Expenditure of valuable commodities.* This contains a list of offerings.
- (iv) *Official reports and documents.* These contain circulars specifying items received in the presence of witnesses.

The daily summary accounts are very similar in most respects, hence the following discussion concentrates on only two daily accounts, taken from Spalinger's [1985a] translation, which capture the most important features of the whole document (see Figures 5 and 6).

FIGURE 5
Daily Summary Account

	Day 29 — S 28					
ACCOUNT REVENUE	Variegated bread <i>kw</i>	Beer <i>des</i>	<i>hrt</i>	Dates <i>hpt</i>	Dates <i>hmnw</i>	Vegetables Bundles
Total revenue	1680	135	2	1	52	200
Remainder day 28	200	—	—	—	—	—
Temple of Amun	100	10	—	—	—	—
TOTAL	1980	145	2	1	52	200
DEBIT						
Palace	625	45	2	1	52	200
Workhouse amount to <i>pr mn't</i>	630	61	—	—	—	0
Workhouse amount to ordinary clients	525	38	—	—	—	0
TOTAL	1780	144	2	1	—	200
REMAINDER	200	1	0	0	0	200

Source: Spalinger, 1985, p.185.

Each of the accounts was recorded in a tabular format made of two consecutive parts; revenues (credits? I prefer the term 'receipts') and disbursements (debits?).⁴ The revenues part shows the balance from the previous day, total revenue due to the Pharaoh and revenue from the Temple of Amun. The disbursements part records goods delivered in the main to the Palace, the Palace's immediate dependants, and ordinary clients (people), in addition to a variety of others such as musicians, personnel in the Carpenter's Workshop and the Scribe of the

⁴The ancient Egyptian word for 'revenues' has a variety of additional meanings, including 'rations', 'provisions', and 'foods'. Later on in the daily summary accounts the same word was used in these latter senses. See Spalinger [1986, pp. 228-230].

Harim. The numbers of people involved vary from day to day, presumably because some were away on duty [Quirke, 1990]. At the end of each day the Scribe of the Accounts calculated the total of each of the revenues part and the deliveries part, and found the remainder (balance) for that day for each type of commodity.

Figure 5 shows the account of day 29, month two. The revenues part of the account documents for each of six types of commodity amounts delivered for the Pharaoh and the daily dues from the Temple of Amun. The remainder (balance) carried forward from the previous day is recorded as that "[w]hich was brought to him [the Pharaoh] as the remainder of that day" [Spalinger, 1986, p. 210]. The other part of the account records the distribution of each of these six commodities to the Palace, the Palace's dependants, and the ordinary clients. Each daily account is therefore akin to a master ledger summarizing detailed ledger accounts for each of the individual commodities.

Some Preliminary Observations: The following three observations emerge from an examination of these summary accounts. First, the aggregate daily requirements of each of the three main consumption centers; the Palace, the Palace's dependants, and ordinary clients, almost exactly match the revenues accruing to the Pharaoh plus the dues from the Temple of Amun, as in the case of variegated bread (1780 loaves, Figure 5). These figures appear to be standard provisions throughout all the daily accounts, except in the case of days 25 and 26 where provisions for the Palace were smaller by 50 loaves. Similar arguments apply to beer, edible dates, and vegetables, where standard provisions were observed daily. The consumption patterns underlying these standard provisions reflected not only the number of individuals in each category, but also the social status of each individual (see below).

Secondly, in the case of variegated bread the scribe kept a recurring daily balance of 200 loaves (with minor variations in only two days). This could have represented a safety-net earmarked for emergencies that may result in unavoidable shortages in revenues or unexpected increases in demand. This does not appear to be the pattern in the case of other commodities; even though the vegetable bundles column shows a remainder of 200 bundles, the remainder in all other daily accounts for vegetables as well as for other commodities was approximately zero. For these commodities the redistributive system operated on the basis of a near perfect matching of demand with supply

thereby resulting in zero balances, presumably because they were not critical for human subsistence. In contrast, the commodities which exhibited a running balance may have been critical for the survival of those who depended on the redistribution. Clearly, bread would have been regarded as more essential than beer, dates and vegetables. Further, compared to beer, meat and vegetables, bread could keep better and for longer periods.

Thirdly, like all other daily accounts in Papyrus Bulaq 18, the account shown in Figure 5 contains entries relating to the goods received and the disbursements made over a particular time interval, namely one day. Egyptologists have somewhat incorrectly called these accounts 'income statements'. For example, Spalinger [1986, p. 229] claims:

Here, we are dealing with monetary quantities (in this case in kind, of course) over an interval of time, specially inflows and outflows. . . . Such accounts state the amount of an item (gold, grain, etc.) that an institution possesses at a point in time and the claim of various parties on those items. Badly put, the day summary charts of P. Bulaq 18 are final income statements, day by day.

In fact, these daily accounts resemble more an appropriation account than an income account. For although it is possible that some of the provisions given to the Palace officials and other functionaries could be classified as wages, most of the entries in each account reflect redistribution of goods that were collected and administered centrally. Expenditures and profits as such do not appear to have a place among these entries. In this relatively straightforward case of redistribution, the accounting techniques used to record and monitor the transactions were similarly simple but effective. By having a separate column for each type of commodity, carefully recording daily receipts and distributions, and by comparing these two items for each column it would have been possible for the scribe/administrator to gain a fairly good idea of the daily remainders of each commodity at a glance. Moreover, combining the power of inscription with technical accounting expertise made it possible for the scribe to trace the inflow and outflow of commodities, thereby minimizing the potential for embezzlement and emphasizing the accountability and responsibility of all those involved, including the scribes themselves. Inscribed accounting entries were therefore a means by which the scribes could show their

own competence in discharging their responsibilities, and senior officials could demonstrate to the Vizier and the Pharaoh their worth in monitoring the affairs of the Palace.

FIGURE 6
Daily Summary Account
Day 1 — S 41

	Variegated bread <i>kw</i>	Bread- <i>inw</i>	Beer <i>des</i>	<i>hrt</i>	Dates <i>hpt</i>	Dates <i>hnw</i>	Vega- tables sacks	Vega- tables bundles	
ACCOUNT REVENUE									
Total revenue	1680	—	135	2	1	52	—	200	
Remainder day 30	200	—	2	—	—	—	—	—	
Temple of Amun	100	—	10	—	—	—	—	—	
Due today	—	938	90	7	—	—	7	—	
TOTAL	1980	938	237	9	1	52	7	200	
DEBIT									
Palace	625	—	45	15	2	1	52	—	100
Workhouse amount to <i>pr mn't</i>	630	—	61	—	—	—	—	—	50
Workhouse amount to ordinary clients	525	—	38	—	—	—	—	—	50
Delivered as <i>š3bw</i> - food to officials and people of <i>pr mn't</i>	—	310	35	5	—	—	7	—	—
Delivered as <i>fk3w</i> to officials and citizens	—	290	22	—	—	—	—	—	—
TOTAL	1780	600	216	7	1	52	7	200	
REMAINDER	200	338	21	2	0	0	0	0	

Source: Spalinger, 1985, p.187.

More Complex Patterns of Redistribution: Examination of the more complex cases of redistributive patterns in the daily summary accounts yields further evidence of the centrality and potency of accounting practices in regulating these patterns. The account of day one, third month of inundation (Figure 6) is a good example. In addition to the ‘standard’ entries observed in the account of day 29, second month of inundation (Figure 5), the account of day one (Figure 6) reveals a more intricate pattern of redistribution. This can be traced to levels of distribution. While the total of the debit side for Variegated bread, dates

(hnw) and vegetable bundles is the same as in most of the other daily accounts, there are two main differences:

- (i) An additional consumption of bread-*inw* in the order of 600 loaves (310 + 290), and
- (ii) An increase in the consumption of beer in the order of 72 *des* jugs (15 + 35 + 22).

In order to deal with these non-standard requests (needs), presumably caused by the special needs of the Palace (i.e. the additional 15 *des* jugs of beer), or by the need to make additional provisions for officials, the Scribe of the Accounts introduced:

- (i) A second new column for bread-*inw* (which Spalinger [1986, p. 209] translates as 'impost' in preference to 'tax' or 'tribute'); and, more significantly,
- (ii) A new entry called 'due today' (or more precisely: "that which is brought to him as levied-due on this day"; see Spalinger [1986]) which is used to record the additional revenues, or receipts raised to meet the increase in demand. This 'due today' entry only appears in those daily accounts where the redistributive pattern is non-standard. It is a temporary device employed by the scribe to deal with an unusual situation. These additional revenues are not necessarily only matched to the increased demand of that particular day; typically they allowed for increased demand for subsequent days, hence the balances carried forward for bread-*inw* and beer.

It is noteworthy that the 'due today' entry was reserved for those special demands that were *significant* in magnitude. Relatively small discrepancies between inflows and outflows were accommodated by making minor adjustments in the redistribution patterns, by reducing the allocations to the groups entered on the debit side, except for the Palace. For example, in the account of day 28, second month of inundation (not shown here), a special need arose for an additional 40 loaves of bread and five jugs of beer. Instead of making up for these small extra needs through the 'due today' entry, the bread provisions for the Palace dependants were reduced by 30 loaves, and the ordinary clients suffered a reduction of ten loaves of bread and five jugs of beer. The 'due today' entry was also activated whenever one of the main sources of revenue failed to deliver its expected contribution. This was the case in the account of day 26, second

month of inundation (not shown here), when ten additional jugs of beer were raised through the '*due today*' entry to make up for the failure of the Temple of Amun to deliver its share.

To summarize: (i) the Scribe of the Accounts used the simpler account format (Figure 5) as long as inflows and outflows were of the standard amounts (i.e. about the same as expected); (ii) whenever the difference between inflows and outflows was significant the '*due today*' entry was used to balance them; and (iii) remainders (balances carried forward) of commodities, with the exception of Variegated bread, were kept to a minimum (normally zero); presumably to reduce the cost of storage and keep the food supply fresh. Whenever the receipts were noticeably greater than the standard needs, with little evidence of imminent increase in demand, balances were run down by making larger allocations than standard to the Palace. In this sense, the Palace and its dependants operated as a clearing house, always keeping demand tuned to supply. Notice, however, the asymmetry reflected in the Palace being the recipient of surplus, but never having to make up for deficits which were borne by other groups.

In addition to offering a means of coordinating and monitoring the redistributive patterns, the daily summary accounts may have played critical social roles. Thus, the detailed documentation supporting the accounts shows clearly the sources of supply of each commodity, which come under the entry '*total revenue*' (or better, total receipts), and the precise expected and actual contributions from each source. Bread, beer and vegetables were typically divided between (i) the Waret of the Head of the South, (ii) the Labor Bureau, and (iii) the Treasury (vegetables and Variegated bread, but not bread-*inw*). In contrast, dates and other commodities were provided, almost exclusively, by the Waret of the Head of the South [Spalinger, 1985a, p. 213]. Further, the calculations on the debit side of the daily summary accounts reveal yet another intricate pattern of supply: (a) in the case of vegetables the Palace received its supplies from the Waret of the Head of the South, whereas the Labor Bureau and the Treasury supplied the Palace dependants and the ordinary clients; and (b) no division of labor was apparent, however, in the case of beer and bread. The evidence also suggests that the State Workhouse, which operated apparently as a lending bank storing food items, held separate accounts for each of the above three Departments of the State: the Waret of the Head of the South, the Treasury, and the Labour Bureau [Spalinger, 1985a, p. 208]. Although the State Workhouse in

general was a productive center in its own right, in the case of Papyrus Bulaq 18 it appears to have operated mainly as a transfer point, as an entrance to the Palace, and a conduit for the flow of commodities from the Waret of the Head of the South, the Labor Bureau and the Treasury to the Palace.

To a significant extent then the daily summary accounts, enshrined in their underlying calculus, performed several important roles. First, they established, reaffirmed, or reproduced a particular order of priority, so that on the debit side, for example, the Palace entry came first, followed by the Palace dependants, and then by ordinary clients. This order was strictly observed throughout the accounts. Through the prioritization of claims in this precise manner, the accounting practices reproduced and legitimized the social hierarchy of the Middle Kingdom. Secondly, the accounts reaffirmed the social strata and the very fabric of Egyptian society by linking sources of revenues (receipts) and provisions to specific institutions and class categories which reflected a large measure of dependency on the State and its administrative apparatus. This dependency can be taken to be the earthly manifestation of the spirit of *Maat*, not only in terms of securing social justice, but also maintaining overall order and equilibrium. Thirdly, the day summary accounts reinforced such dependency relationships through the determination of precise rations of provisions in a manner that emphasized the social and political status of the recipients.

SOME REDISTRIBUTIVE PATTERNS INVOLVING THE TEMPLE

This section examines evidence relating to distribution patterns of economic transactions involving temple personnel. As in the preceding section, the emerging redistributive patterns are fairly complex, but they are also quite different in nature and are coordinated by means of different accounting practices, a testimony to the creative skills of the scribes of the Middle Kingdom. The transactions analyzed here come from tomb No. 1 at Assiut, and belong to Hepzefi who was the nomarch of Assiut during the early part of the reign of Dynasty XII (1990 B.C. onwards).

The Transactions: The transactions are contained in ten contracts made by Hepzefi [Breasted, 1906/1988, Vol. I, pp. 258-271; Spalinger, 1985b]. Contracts I – VI were written in Hepzefi's capacity as the High Priest of the Wepwawet Temple,

and VII – X when he was High Priest of the Anupis Temple. These contracts also reveal different practices in the case of office-held property (for example grain) as compared with personal property (in this case land and temple days). As nomarch, Hepzefi inherited land, services (such as temple offerings), and duties distinct from those which he acquired as High Priest. Also, as High Priest of the Wepwawet Temple, he performed specific duties for which he received payments in kind. Further, as a private person, Hepzefi inherited land and cattle from his parents. As High Priest, he was not allowed any revenues from the temple estates, and his most significant roles in the ten contracts were those of nomarch and citizen [Spalinger, 1985b]. Some of the resources represented in transactions accrued to Hepzefi while he was alive by virtue of being High Priest, nomarch and private citizen, while other transactions were performed by the *ka* priest in the name of Hepzefi after his death, as a statue. However, all ten contracts came into force only after the death of Hepzefi. The transactions deal with the role of the *ka* priest in serving the mortuary cult of Hepzefi. In exchange for the tomb services and duties performed by the *ka* priest, and his successor, the tomb owner Hepzefi paid in return land and cattle. Below, I examine four contracts (III; IV; VIII; and IX) that relate to the Temple of Anubis, as these capture the main redistributive patterns of the complete set of contracts.

Contracts III and IV are economically connected; they both deal with the 18th day of the first month (the day of the *Wag* festival). According to contract III the ten members of the official body of the Wepwawet Temple give certain goods to Hepzefi's statue (i.e. to his *ka* priest), with the chief priest contributing twice as much as each of the remaining staff as shown in Figure 7 [Breasted, 1906/1988, pp. 262-263].

This revenue was given to Hepzefi's statue in return for him giving the priests revenues (bread, beer and meat) in the form of 22 days of service in the Wepwawet Temple which he had inherited from his father (private inheritance); each day being specified as 1/360 of a year. This allocation of the 22 day revenues to the chief priest (superior prophet) and his staff was in exactly the same proportions as their own contributions; twice as much for the chief priest (four days) as the proportion given to each member of the remaining nine staff (two days each). A price equivalent can now be placed on each of the 22 temple-days that Hepzefi inherited: one jar of beer + 100 flat loaves of bread + 2½ white loaves of bread.

FIGURE 7
Hepzefi's Contracts

III. Third Contract

Title

549. Contract which the count, the superior prophet, Hepzefi, triumphant, made, with the official body of the temple, to-wit:

What Hepzefi Receives

550. There shall be given to him bread and beer in the first month of the first season, on the eighteenth day, the day of the Wag-feast. List of that which shall be given:

Register of Names	(Khy-) Jars of Beer	Flat Loaves	White Loaves
Superior prophet	4	400	10
Announcer	2	200	5
Master of secret things	2	200	5
Keeper of the wardrobe	2	200	5
Overseer of the storehouse	2	200	5
Keeper of the wide hall	2	200	5
Overseer of the house of the Ka	2	200	5
Scribe of the temple	2	200	5
Scribe of the altar	2	200	5
Ritual priest	2	200	5

What He Pays

551. He hath given to them for it, 22 temple-days, from his property of his paternal estate, but not from the property of the count's estate: 4 days to the superior prophet, and 2 days to each one among them.

Definition of "Temple-Day"

552. Lo, he hath said to them: "Behold, as for a temple-day, it is 1/360 of a year. When ye therefore divide everything that comes into this temple, consisting of bread, of beer and of meat for each day, that which makes 1/360 of the bread, and of everything, which comes into this temple, is the unit in these temple-days which I have given to you. Behold, it is my property of my paternal estate, but it is not the property of the count's estate; for I am a priest's (*w^cb*) son like each one of you. Behold, these days shall belong to every future official staff of the temple, since they deliver to me this bread and beer, which they give to me".

Conclusion

553. Lo, they were satisfied with it.

Source: Breasted, 1906/1988, pp. 262-263.

Contract IV (see Figure 8) [Breasted, 1906/1988, pp. 263-265] specifies that the temple priests (TP) each deposit one loaf of white bread for Hepzefi's statue on the day of the *Wag* festival, and perform additional services for his cult. The contract also states that Hepzefi gives the TP a sack of fuel (one *khar*) for a bull or an *uhet* of fuel for a goat, which the TP usually give to

FIGURE 8

Hepzefi's Contracts

IV. Fourth Contract

Title

554. Contract which the count, the superior prophet, Hepzefi, triumphant, made with the lay priests of Upwawet, lord of Siut, to wit:

What Hepzefi Receives

555. There shall be given to him:

- (a) A white loaf per each individual among them, for this statue, which is in the temple, in the first month of the first season, on the eighteenth day, the day of the Wag feast.
- (b) And they shall go forth, following his mortuary priest, at his glorification, when the fire is kindled for him, as they do when they glorify their own noble ones, on the day of kindling the fire in the temple. Now, this white bread shall be under the charge of my mortuary priest.

What He Pays

556. He hath given to them for it:

- (a) A khar (*h^er*) of fuel for every bull, and an uhet (*wh't*) of fuel for every goat, which they give into the storehouse of the count, when each bull and each goat is offered to the temple, as ancient (dues) which they give into the storehouse of the count. Lo, he hath remitted it to them, not collecting it from them.
- (b) And hath given 22 jars (*kby*) of beer and 2,200 flat loaves which the official body of the temple give to him in the first month of the first season, on the eighteenth day, as compensation, for their giving white bread per each individual among them, from that which is due to them from the temple, and (as compensation for) his glorification.

Futher Specification

557. Lo, he spake to them, saying: "If this fuel be reckoned against your by a future count; behold, this bread and beer shall not be diminished, which the official body of the temple deliver to me, which I have given to you. Behold, I have secured it by contract from them."

Conclusion

558. Lo, they were satisfied with it.

Source: Breasted, 1906/1988, pp. 263-265.

the Workhouse of the nomarch, for which he receives payment from them. This effectively simplifies the transaction to one in which the TP provide white bread and service to Hepzefi's statue for which the latter appears to pay nothing in return. The remainder of the contract states that the temple staff are to hand over to the TP the total amount of beer and the flat bread that they were to give to Hepzefi's statue on the day of the *Wag* festival. This transaction excludes the 55 loaves of white bread

(contract III) which presumably were used at the discretion of the *ka* priest. Taken together then the two contracts reduce to the following: Hepzefi gives an inheritance of 22 days' revenues in the temple to the temple staff in return for which they owe him a specified quantity of beer and bread which they give to the TP, with the transaction being monitored by Hepzefi's mortuary *ka* priest.

FIGURE 9

Hepzefi's Contracts

VIII. Eighth Contract

Title

576. Contract which the count, the superior prophet, Hepzefi, triumphant, made, with the lay priests of the temple of Anubis; to-wit:

What Hepzefi Receives

577. There shall be given to him:

- (a) A white loaf per each individual among them, for his statue, in the first month of the first season, on the seventeenth day, the night of the Wag-feast.
- (b) And that they shall go forth, following his mortuary priest, and kindle for him (the count), the fire at his glorification, until they reach lower steps of his tomb, just as they glorify their noble ones, on the day of kindling the fire.
- (c) And that the priest belonging in each month shall give [-] of bread (*p'k*) and a jar of beer for his statue, which is on the lower steps of his tomb, when he comes forth from offering in the temple every day.

What He Pays

578. He hath given to them for it; grain from the first of the harvest of every field of the count's estate, as every citizen of Siut does from the first of his harvest. Now, behold, he begins with having his every peasant give it from the first of his field into the temple of Anubis.

Injunction to Future Nomarchs

579. Lo, the count, Hepzefi, said "Behold, ye know, that, as for every official (*sr*) and every citizen, who gives the first of his harvest into the temple, it is not agreeable to him, that there should be lack therein. Therefore shall no future count diminish to future priests that which is secured by contract of another count."

Individual Payment and Remuneration

580. This grain shall belong to the lay priests, per each individual priest, who shall give to me this white bread. He shall not divide it to his colleagues, because they give this white bread, each by himself.

Conclusion

581. Lo, they were satisfied therewith.

Source: Breasted, 1906/1988, pp. 267-269.

Contract VIII (see Figure 9) [Breasted, 1906/1988, pp. 267-269] focuses on Hepzefi's nomarchal role. It states that each of the Temple Priests provides one loaf of white bread and service duties to Hepzefi's statue in return for: "grain from the first of the harvest of every field of the count's estate".⁵ Given that the nomarchal estate belonged to the office of the nomarch, this is a cost free transaction for Hepzefi since it is the living nomarch who pays the temple. Effectively, this amounts to a tax which Hepzefi levied during his tenure as Priest of the Anubis Temple, a practice which he urges his successor to continue honoring.

In contrast to the above contract, Contract IX in Figure 10 [Breasted, 1906/1988, pp. 269-270] involves Hepzefi as a private citizen [see also Spalinger, 1985b, p. 16]. Working on the assumption that one *aroura* of land = 100 *h>t* of land [ibid., p. 16], the contract specifies that Hepzefi's statue gives:

Overseer of the Necropolis	4 <i>arouras</i> of land
His Assistants (9 x 2 <i>arouras</i>)	18 <i>arouras</i> of land
Total	22 <i>arouras</i> of land

In addition, each man receives the foot (not the whole leg) of every bull that would be slaughtered in the highland. In return, they give to the cult of Hepzefi:

	<i>Ds</i> -jars of beer	flat loaves	white bread
Overseer	2	100	10
Highland Chief	1	50	5
Eight Mountaineers	8	400	40
Total	11	550	55

The land offered by Hepzezi was part of his paternal inheritance, rather than nomarchal land. Spalinger [1985b] speculates that there is a missing entry in this contract which would have effected a redistribution of the beer and bread among the temple staff, with the chief priest receiving double the share of each of the remaining staff, as in previous contracts. It is also worth noting that, unlike in contract III where payments were made in days of the Wepwawat Temple revenues, the payments in contract IX were made from private land, indicating the possibility that Hepzezi had no inheritance of temple days at Anubis.

⁵Spalinger [1985b, p. 15] translates this line as "What he gave to them on account of it – 1 *hk3t* [*hekat*] from the first fruits of the harvest of every field of the nomarchal estate."

FIGURE 10

Hepzefi's Contracts

IX. Ninth Contract

Title

582. Contract which the count, the superior prophet, Hepzefi triumphant, made, with the overseer of the necropolis, and with the mountaineers, to-wit:

What Hepzefi Receives

583. There shall be given:

- (a) That they go to the house of Anubis, on the fifth of the 5 intercalary days, (being) New Year's night, and on New Year's Day, to receive 2 [wicks], which the great priest (*w^cb*) of Anubis gives to the count, Hepzefi.
- (b) And that they go, at his glorification, until they reach his tomb.
- (c) And that they give this one [wick] to his mortuary priest, after they glorify him, just as they glorify their noble ones.

What He Pays

584. He hath given to them for it

- (a) 2,200 (*h't*-) measures of land in the [-] from his property of the paternal estate, but not of the count's estate:

Register of Names	(<i>Ht</i> -) Measures
Overseer of the Necropolis	400
Chief of the Highland	200
Eight mountaineers	1,600

- (b) Besides giving to them the foot of the leg of every bull, that shall be slaughtered upon this highland, in every temple.

What Hepzefi Further Receives

585. They have given to him;

The Overseer of the Necropolis, 2 (*ds*-) jars of beer; 100 flat loaves; 10 white loaves.

The Chief of the Highland, 1(*ds*-) jar of beer; 50 flat loaves; 5 white loaves.

Eight mountaineers, 8 (*ds*-) jars of beer; 400 flat loaves; 40 white loaves.

For his statue, (which is) in charge of his mortuary priest, in the first month of the first season, on the first day, (being) New Year's Day, when they glorify him.

Future Validity of Contract

586. Lo, he said to them: "Behold, these (*h't*-) measures of land, which I have given to [you] shall belong to every overseer of the necropolis, to every chief of the highland, and to every mountaineer who shall come (hereafter), because they shall deliver to me this bread and beer."

Additional Stipulation

587. And ye shall be behind [my] statue which is in my garden, following it when _____, at every feast of the beginning of a season, which is celebrated in this temple."

Conclusion

588. Lo, they were satisfied therewith.

Source: Breasted, 1906/1988, pp. 269-270.

Accounting for the Dead: Overall, these transactions are of a very different nature to those examined in the previous section. Redistributive transactions they surely were, with the *ka* priest being the key figure, playing the same central role as that played by the state in the previous section. Here, the inflow and outflow of goods are mediated through the *ka* priest. In a sense, he was expected to act as the sole agent for Hepzefi, making transactions and monitoring their execution on his behalf. However, these transactions are akin to the execution of a will in modern times, for the redistributive pattern is established once and for all when each contract is written. Subsequent nomarchs and high priests may have caused some interruption in the redistributive patterns by reneging on some of the contractual terms, particularly those that may have adversely affected their own revenues. But in the main, they would have been considerably constrained by past practices and traditions underpinned by *Maat*, and by the power of inscribed accounting entries reflected in these contracts. We are therefore in the presence of accounting practices that underpinned the contractual terms of the dead, finalized during their life times. Through the deployment of accounting expertise, each contract specified clearly the debits and credits, both in terms of stipulating the amounts and delineating exchange parties. Once inscribed, these accounting numbers acquired a power of their own; for they served not only as testimony of past practices in their own right, but they also endowed these practices with apparent rationality, legitimacy and authority.

Another significant difference between these contracts and the transactions discussed in the previous section is their voluntary nature (they were not enforceable by law). In a classic redistributive economy, the monarch or the state is ultimately responsible for the administration of the economy and the distribution of provisions to all sectors of the population (this, of course, says nothing about whether or not these provisions were determined fairly from a social welfare perspective). With this centrality of the monarch or the state comes the power to direct, control, administer, and dominate; all are bureaucratic manifestations in which accounting is heavily implicated. And although the *ka* priest may have been empowered to control and monitor the transactions on behalf of Hepzefi, the scope of the control apparatus does not appear to be nearly as extensive as that observed at the level of the state. In the transactions contained in the contracts examined in this section, the role of accounting may have been intended to focus primarily upon

providing an authoritative inscription of a pattern of redistribution that had to be observed once the person who bequeathed the will had died. Compliance with such contracts was compelled more by social norms than by the power of the law, and by the incentives built into the contracts to motivate temple staff and priesthood to promote the cult of the dead person for perpetuity. In this sense, accounting practices enshrined in the contracts literally bound individuals (including the dead) across time in an interlocking web of dependency relations.

The diversity of accounting measures contained in these contracts is also of significance. Here we encounter beer, two types of bread loaves, barley, meat, land, and even temple-days, with each being construed as an economic good with precisely denominated values assigned to them via this early accounting. The other interesting point is the apparent importance of the multiplier of 11. For just as we observed in the case of the tax liability measured in *Set-duck* (Figure 3), the figure 11 appears to be a common denominator in these contracts. It is quite likely that this is due to an organization of work practices into teams of nine subordinates and one overseer (who receives twice as much payments as each subordinate), thereby giving the equivalent of 11 persons of equal shares [see Mueller, 1975; Roth, 1991; Ezzamel, 2002e].

CONCLUSIONS AND IMPLICATIONS

The main aim of this paper has been to examine the role of accounting practices in two specific, but predominantly, redistributive patterns from the Middle Kingdom in ancient Egypt. The first example involved provisioning for members of the palace and their dependants while on a royal journey. The second was concerned with several contracts written by a man during his life to ensure the flow of specific provisions to promote his own cult in the temple after his death. In order to contextualize appropriately these accounting practices, the paper began with a brief discussion of the Middle Kingdom where there were two clear historical and social discontinuities which had important implications for accounting practices.

First, the Middle Kingdom was preceded by the chaotic First Intermediate Period that had a profound impact upon the social and political fabric of life in ancient Egypt. Literary sources offer unique insights into the traumas experienced by the ordinary Egyptian during the First Intermediate Period, which resulted in significant revisions in the relationship

between ruler and ruled once the Middle Kingdom began. Socially, this change was manifest in greater emphasis upon social justice as reflected in the concept of *Maat*, whereby the Pharaoh was expected to observe and uphold justice in the land even more so than during the Old Kingdom. Administratively, this change was reflected in the emergence of relatively more decentralized governments, compared to the highly centralized administration of both the Old and New Kingdoms. Through inscribed accounts and the visibility that this created, superiors could demonstrate most clearly to their subordinates that justice was being observed. The determination and inscription of precise rations for individuals of varying rank or those undertaking different tasks was a manifestation of doing *Maat*. Once these rations were determined and then applied consistently, it would have been easy to demonstrate through this consistency that *Maat* was being observed. These inscribed accounts also provided the means for subordinates to demonstrate to their superiors and peers, their integrity, responsibility, efficiency, and trust-worthiness, the very qualities frequently celebrated in tomb reliefs and autobiographies.

The second major discontinuity occurred from the Twelfth Dynasty onwards, and in particular during the reign of Sesostrius III, with the advent of military expansions in the South (Nubia). These military campaigns provided the conditions of possibility for a massive expansion of state bureaucracy, a significant increase in administrative titles, and greater refinement in the nature of tasks, all of which were formalized through inscriptions. This was accompanied by greater emphasis on bookkeeping and accounting. The scribes attended to the increased power of the central authority by providing more detailed recording of activities that made it possible for state administrators to trace out and monitor the flow of resources into the state coffers and out again in the form of redistribution. The summary daily accounts of Papyrus Bulaq 18 examined in this paper provide one example of this urge to record economic transactions in much greater detail and over shorter intervals compared to the typical accounting practices employed during the Old Kingdom.

An intricate web of accounting practices was developed and used to trace the levying and collection of taxes in kind, the storage of these goods in state granaries, the monitoring of granary inventories, and the subsequent redistribution of goods to the various recipients in accordance with the pre-determined rations. In each of these stages, the intervention of accounting was all too evident. To provide guidelines against which actual

crops could be assessed, estimates of the crop were made using a variety of indicators (such as the size of the land, the canals, lakes, wells, and trees). The actual tax levy was based upon the crops produced, but one suspects that measures of the actual crops were contrasted against those estimated, as well as the possibility that tax estimates underpinned the state's planning system. When the crop was of the same type, tax liability was quantified in terms of so many capacity measures (say *khar*) of that crop. When taxable produce was of different types, a money of account was used as a common denominator, such as the *Set-duck* in the case of the Kahun papyri. The tax yield was stored in state storehouses where the scribes ensured their careful recording both in terms of incoming stocks and stocks issued to various denominated users. All these activities were reported upon regularly to high officials, ending with the office of the Vizier, who in turn reported to the Pharaoh. What is evident here is that a carefully articulated set of accounting and control practices were developed to underpin Egypt's redistributive economy.

The various accounting innovations discussed earlier in relation to Papyrus Bulaq 18 demonstrate the high skills of the scribes and testify to the sophisticated nature of their technical expertise. This expertise made possible the daily matching of consumption patterns against revenues (receipts) for each main commodity; the use of the 'due today' entry to balance inflows and outflows when different; the running of recurring daily balances of bread loaves; and the keeping of near zero balances for commodities that needed to be kept fresh (vegetables) and which were not critical for survival. Moreover, the human chain of the redistributive system through which commodities and objects exchanged hands, that is suppliers, receivers, distributors, and ultimate consumers, became intricately linked as a set of complex and interdependent relationships coordinated in the main via accounting entries. In sum, the scribal technical expertise made it possible for a carefully articulated redistributive system to function reasonably smoothly.

Further, these accounting practices reveal the significant asymmetry between the palace and ordinary people, whereby shortages in supply were never shared equally between the Royal family and the commoners, but rather accounting practices ensured that the burden was always borne by ordinary people. The precise order in which different categories of recipients were recorded also reemphasized the structure of society. In this strict order the Royal family came first, followed by the

Palace dependencies, and then by ordinary clients. By prioritizing claims in this manner, accounting practices served to legitimize and reinforce the social order for a number of reasons. First, accounting was the prerogative practice of the elite numerate and literate scribes who wielded significant power in ancient Egyptian society, and hence accounting became endowed with the legitimacy of professional expertise [Ezzamel, 1994]. Secondly, through the accounting practice of enumerating quantities and prioritizing entries, relations expressed through these entries acquired a more precise articulation that had the aura of precision and objectivity. Thirdly, accounting practices were associated with the hierarchical structure of ancient Egyptian society and, as the accounts show, they underpinned this structure in explicit terms. Fourthly, however perverse it may appear to us today, accounting practices formed an important part of *Maat* (justice/order). For *Maat* did not simply imply observing equity and social justice between all. Crucially, it also implied preserving the status quo as any disturbance to that order was construed as an undesirable state of affairs that threatened the security of Egypt, and by implication the prosperity of the Egyptian people [Lichtheim, 1992].

Accounting practices also played a crucial role in underpinning the writing and execution of private wills. In the case examined in this paper, ten contracts were specified through accounting inscriptions, and their precise execution was monitored through the intervention of accounting. This example provides yet another demonstration of the centrality of accounting practices to the ancient Egyptians in life and death. Moreover, it testifies to the high levels of scribal skills and the adaptability and malleability of accounting techniques in underpinning the forging and execution of private transactions. Accounting practices were mobilized to assure Hepzefi, while alive and also in death, that his soul would be provided for and that his cult would be promoted. For him, the satisfactory promotion of his cult required giving, but this giving was not random or ad hoc, rather it was carefully calculated, a measure for measure; or even an overcompensation to ensure compliance with the terms of the contracts for generations to come. Only through accounting and social norms could he be ensured that the *measured* giving will be observed. He does not only provide a mere enumeration of objects to be given but, more importantly, each item is quantified in precise terms.

The technical expertise of the scribes is paraded in these contracts. For not only do we encounter a mere enumeration

and quantification of different objects, but there is also an internal consistency that operates within the system of accounting in use. The senior priest is always differentiated from his subordinates by having rations twice as much as that of each subordinate. A clear statement is made in the contracts as to the amounts to be paid by each named person and also their recompense is stipulated clearly. As in the case of any sound accounting practice, so these contracts show clearly who has to pay what, and how are they to be (over)compensated, for what they pay. In modern terminology, the debits and credits are stated unambiguously. Moreover, we do not only encounter here simple exchange of conventional economic goods, but we also observe the use of temple days, inherited by Hepzefi, as payment precisely defined in terms of their temporal dimension (each being $1/360$ of a year) and valued in terms of their economic equivalence. Again, a measure for measure is established, whereby each temple-day is set to equal a precise economic value.

Taken together, these varied roles played by accounting in two separate spheres of the economy, one relating to the state and the other to the private domain, emphasize the centrality and power of accounting practices during the Middle Kingdom era of ancient Egyptian history. The accounting practices examined in this paper do not reveal some crude, and by modern standards 'simplistic', calculative technology. We have encountered an accounting that developed as integral to the social, economic, administrative and political contexts of the Middle Kingdom. The accounting practices were inextricably linked to the institutions in which they operated, the Palace, its dependants, the priesthood and the cult of the dead. That the nature of the entries, their frequency, and the units of measurement used may have varied across the palace accounts and the contracts of the temple suggests that the scribes did not simply and unreflexively apply some static and uniform system of accounting to all settings. Rather, the evidence confirms the increasing recognition that accounting practices both mediate and are mediated by the wider and unique social, political and economic contexts in which they operate. Such ancient accounting practices should therefore be analyzed and understood on their own terms, contrary to the suggestions of some researchers [e.g. Stevelinck, 1985] who either dismiss their relevance or, at best, view them as an impoverished, simplistic, and crude precursor to modern forms of accounting.

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Margaret Lamb
UNIVERSITY OF WARWICK

DEFINING “PROFITS” FOR BRITISH INCOME TAX PURPOSES: A CONTEXTUAL STUDY OF THE DEPRECIATION CASES, 1875-1897

Abstract: Seven British income tax disputes over depreciation (1875-1897) are analyzed in this contextual study. The legal cases reveal how uncertainty over meanings for “depreciation,” “profits,” and “capital” reflected social and political tensions which had commercial accounting implications. Case analysis yields evidence of how judicial support reinforced the Inland Revenue’s technical authority over a competing tax administration institution and enabled its modern regulatory control over taxpayers to be constructed. The British example illustrates the ways in which technical and administrative practices may emerge from the contestation of meanings that takes place both in a wide political context and within particular institutional settings.

INTRODUCTION

This paper is a contextual study of seven British income tax cases reported between 1875 and 1897. Each case concerns a dispute between tax officials and taxpayers over the treatment of depreciation in the calculation of taxable profits. Not only does the problem of “depreciation” represent a significant theme in early income tax history, but the tax treatment of depreciation is a focus of accounting historians as an influence on the develop-

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ment of commercial accounting practices. In 1881, the *Coltness* case established the leading tax principle that amounts incurred in the acquisition of a capital asset, even when allocated over the useful life of the asset, are not deductible in computing the profits of a trade [Tiley and Collison, 1999, p. 427]. Cases before 1881 reveal the development of the judicial principle, and cases after 1881 reveal how distinctive tax rules were applied.

The purpose of the paper is to consider how the decisions in the tax depreciation cases affected tax practice and an emergent accounting measurement practice. In these cases, we find evidence of how the Inland Revenue used the support of the courts to reinforce its regulatory control over taxpayers and technical authority over a competing tax administration institution, the local General Commissioners of Income Tax. In addition, the cases provide evidence of alternative meanings for and measurement practices associated with "depreciation," "profits," and "capital." As Parker [1994] points out, the meanings of these words for other purposes were unsettled and changing in this period. No consensus existed that depreciation was a measure of the cost or valuation of the economic benefits of tangible fixed assets consumed during an accounting period, and, as such, that depreciation represented a writing off of capital in the annual calculation of profits. An analysis of the institutional politics of the tax depreciation cases also lends support to an explanation why the judiciary abjured precise definition of "profits" for income tax or dividend distribution purposes. Judges left themselves flexibility to change regulatory concepts of calculation when judicial definitions were abstract and not defined in much detail. Thus, they were better able to avoid the creation of regulatory conflicts between income tax and other areas of their jurisdiction. The paper concludes that, with judicial support, the Inland Revenue was able to construct *de facto* regulatory control of the income tax. Judicial decisions reinforced taxing practices based on writing, interpretation, and examination of texts, and extended calculation. Such practices formed the basis for the disciplinary power of the modern Revenue and supplanted taxation based on the exercise of sovereign power.

The political, legal, and institutional context for the tax depreciation cases is developed by reference to related cases and documentary sources, including reports of Parliamentary Select Committee (SC) and Commissioners of Inland Revenue (CIR). In the depreciation cases themselves, we can find evidence concerning processes of accounting for taxable profits, as well as "the court's narration of . . . particular accounting principle[s]"

... buried in the *dicta*" or to be inferred from other details [Mills, 1993, p. 766]. Close examination of court judgments and consideration of the wider context suggest how the courts might have intervened to support particular social, political, or economic outcomes [French, 1977; Reid, 1987; Bryer, 1998].

Hopwood and Johnson [1986] challenged accounting historians to study accounting practices in the social, economic, and institutional contexts in which they operate, and Hopwood [1983] urged researchers to explore how accounting shapes the way in which organizations function. Taxation is an arena for accounting that has not been studied in much detail from these perspectives. A few studies [Preston, 1989; Boden, 1999] research taxation as a social and institutional practice, but modern practice is their focus. Lamb [2001] begins to redress the taxation gap in the "new accounting history" literature [Miller et al., 1991] with a study of accountability in mid-19th century British tax assessment practices. The present paper continues this analysis of accountability in the late 19th century. It is also a response to calls for more studies of accounting and the law [Bromwich and Hopwood, 1992; Freedman and Power, 1992]. It considers "issues such as how and why accounting and the law intersect, whether this is due to certain fundamental limits that law encounters in seeking to regulate certain practices, and what happens to both accounting and law when such intersections take place" [Miller and Power, 1992, p. 230].

This paper reflects upon how concepts of "profits," "capital," and "depreciation" emerged in the legal practices of "income" taxation, starting from a recognition that these concepts are not and never were self-evident [Hopwood and Johnson, 1986, p. 39]. It supplements prior accounting history studies of "the nature and significance of legal interventions in accounting processes" [Mills, 1993, p. 765] and seeks better understanding of the common law on accounting, broadly defined to cover commercial accounting, accounting for distributable profits, and accounting for taxable profits.

Contestation of meanings: As Martin Daunton [2001, p. 389] argues, "the language of taxation permeates the history of Britain" in the 19th century, and taxation was "a central element" in important political debates concerned with the ordering and conduct of society, economy, the State, and its institutions. By the 1870s many of the debating positions, claims, and institutional characters could be recognized. In 1875 representatives of the Glasgow Chamber of Commerce petitioned the Treasury and

the Inland Revenue in London for a change of law to permit trading concerns an income tax deduction for depreciation. Many examples were catalogued, including several court cases, where businesses had been denied an equitable deduction for depreciation. By early 1877, the lobby to introduce the depreciation allowance had become a "movement" [CIR, 1878b, p. 64]. The prominent accountant, company promoter, and Member of Parliament David Chadwick supported the change. During the 1877 budget debates, Chadwick "submitted that the incidence of the income tax and the mode of assessment were most unjust and inconsistent" because of the absence of a depreciation allowance [Hansard, 12 April 1877, col. 1029]. In committee, he repeated his claim: "[Income tax was] a very good and very honest tax; but as one most unjustly and inequitably levied. . . . Take trade. The mine owner had to pay on his capital as well as his income. So also had the cotton-spinner, neither being allowed anything whatever for the annual depreciation of their property" [Hansard, 16 April 1877, cols. 1242-1243].

An attempt to introduce a depreciation allowance through the 1877 Budget Bill was rejected by the House of Commons [CIR, 1878a, p. 54]. The Chambers of Commerce made further representations to the Chancellor of the Exchequer. The Revenue took steps to clarify the position. This agency, which represented the interests of the Exchequer in income tax administration, argued that existing tax law already gave taxpayers the *equivalent* of the depreciation allowance that the Chambers sought and the issue was one of lack of uniformity of practice by tax authorities across the UK. In June 1877 the Revenue sent a circular letter to all local Commissioners of Income Tax that made clear the Revenue's belief that the lobby for the change in tax legislation "must have arisen from the provisions of the Income Tax Acts not being clearly understood" [CIR, 1878b, p. 64]. The statutory allowance for repairs, it argued, could be interpreted to cover a provision for depreciation, narrowly interpreted as "wear and tear". The letter was one of numerous instances in which the Revenue attempted to demonstrate its technical authority over the local Commissioners who had formal legal authority to administer the income tax.

Notwithstanding the Revenue's efforts at clarification, further representations were made in 1878 and Parliament agreed to change the law. Income tax law thereafter officially sanctioned allowances given by the Commissioners for "wear and tear". The new law was limited in scope, and not a comprehensive allowance for depreciation. The judicial case law reviewed

in this paper confirms this. "Depreciation" was not a word that appeared in the Taxes Acts, but the contentions of taxpayers and the tax authorities before the courts sought to establish a relationship between this measurement concept and words that did appear in the Acts: "income," "profits" and "capital". The depreciation tax cases created meanings for these terms that were essentially different from their meanings in commercial accounting and other areas of judicial law.

The paper proceeds as follows. The first part develops the theoretical and historiographic underpinnings of this study. An outline of the legal basis for and practices of calculation of taxable profits in the mid- to late-19th century comes next. Then, the tax depreciation cases and their implications are examined. Finally, the arguments and evidence presented in the paper are discussed and summarized.

THEORY AND PRIOR LITERATURE

Regulatory Control of the Income Tax: 19th century income taxes were unpopular because they required "vexatious inquisition" into taxpayers' personal affairs and they incorporated features that were often labeled "inequitable". Early income taxes were tolerated as war taxes. In England, the income tax was an important, temporary part of the fiscal system during the Napoleonic Wars (1799-1815), but was rescinded in 1816 as soon as the wars ended. The income tax was reintroduced in 1842 as part of wider fiscal reform, and Dauntton [2001] argues that it formed a generally accepted, even if never popular, part of Britain's stable "fiscal constitution" from that time until the 1890s. The relatively high levels of trust in the British fiscal system could be attributed, Dauntton argues [2001, Ch. 1] to interactions between four factors. These were the institutional and administrative processes for collecting revenue; the way in which assessed taxable capacity interacted with economic change; the manner in which the fiscal system was reformed; and the patterns of public spending. Relatively high levels of public trust led in turn to a comparatively high level of voluntary compliance to tax. The acceptability and stability of income tax at the macro-level, however, rested in large part on the ability of social, political, and administrative institutions to accommodate complaints, challenges, and negotiation over the details of taxation at the micro-level.

Effective administration was essential to the success of the income tax. Historical studies of income tax make these points

clear in a comparative sense [Grossfeld and Bryce, 1983; Daunton, 2001, Chs. 1 and 7], as well as specifically in connection with the US [Samson, 1985] and the UK [Sabine, 1966]. Webber and Wildavsky [1986, pp. 300-301] state that in Britain, as in the US and elsewhere, professionalized, centralized public tax administration and government's heavy reliance on direct taxation of income and profits necessarily go together, and both features of modern systems of taxation are legacies of the 19th century. It is a paradox that the Inland Revenue did not gain *formal* authority for tax assessment from the local General Commissioners until the 20th century [Stebbing, 1993, p. 53]. Lamb [2001] argues that it is the *de facto* regulatory control established gradually by the Revenue during the 19th century that made modern income tax such an effective part of the British tax system. The construction of a web of rules and practices by the Revenue to supplement the written law underlies the modern disciplinary power of the agency [Preston, 1989] and forms an important element of a history of comparatively high levels of public trust in the British taxation system [Daunton, 2001].

This paper is informed by a Foucauldian approach to regulation that distinguishes "sovereign" and "disciplinary" modes of power [Foucault, 1975; Hoskin and Macve, 1986, 1994; Boland, 1987; Miller and O'Leary, 1987; Preston, 1989; Miller, 1990, 1994]. Lamb [2001] argues that the overt exercise of sovereign power, essentially unmediated through any "objective" routines of calculation, was the basis for regulatory control in 1855. After 1855 a shift in the mode of regulatory control occurred. A system of governance based on disciplinary power emerged once tax authorities developed ways of obtaining comprehensive knowledge of the taxpayer through writing, examination, and calculation. It was also necessary for the officers of the Inland Revenue to become the lead agents in the exercise of regulatory control, supplanting local Commissioners who had exercised regulatory control based on older traditions of governance [ibid.].

The concept of "regulation" in this paper includes the process of making and then enforcing legal rules, as well as other processes of intervention and control of the objects of regulation [Hancher and Moran, 1989, p. 3]. As with any political process, regulation involves contests for power, and cultural forces and structures shape it [op. cit., p. 4]. Hancher and Moran emphasize the "impact of cultural influences on the organizational character of regulation" [op. cit., p. 5]. A study of tax regulation involves examination of the processes of making and enforcing

formal tax law, as well as the ways in which tax authorities seek to exercise control in micro- and macro-political processes. The interaction of taxation with regulation of commercial accounting (e.g. financial reporting under company law) is well recognized [e.g. Bromwich and Hopwood, 1992; Lamb et al., 1998].

"Regulatory control" is the regulator's operational purpose for employing legal rules and other processes of control. This state is achieved when the regulator's power is recognized by regulatees, and sufficient regulatees comply with the regulator's requirements for the exercise of regulation to be perceived as effective. This outcome is often referred to as "voluntary compliance." Regulatory control may be seen to be adequate, but it is usually incomplete. Ambiguity and complexity of tax law interact in practice to create space for taxpayer creativity and non-compliance with the intentions of tax law [Miller and Power, 1992]. Tax law is "formalist"¹ in nature and, consequently, legal control is elusive [McBarnet and Whelan, 1992]. Tensions arise from the incompleteness of regulatory control.

In this paper we consider some of the tensions surrounding the making and enforcing of tax law that have implications for less formal ways of constructing regulatory control as well. In the analysis of the tax depreciation cases that follows, we seek to highlight elements of legal and accounting practice that assisted the tax authorities in constructing adequate regulatory control. We pay close attention to factors that reinforce the *de facto* authority of the Revenue. The ways in which the courts approached interpretation of tax law are particularly relevant to the construction of the Revenue's regulatory control.

Profit Measurement for Income Tax and Commercial Accounting: For businesses, the connection between income tax and commercial accounting is fundamental. Both processes measure profits of the entity, based on the same pool of transactions. A legal distinction between calculations of profit for tax and for commercial accounting purposes became explicit in 1878 when a statutory allowance was introduced to tax law as a (partial) substitute for commercial measures of depreciation [Edwards, 1976; Watts and Zimmerman, 1979]. Before 1878 the Revenue

¹ "Formalism" means "to be governed by the rigidity of a rule's formulation' [and] assumes that law is 'intelligible as an internally coherent phenomenon,' that there is consistency, predictability, logical coherence and ultimately autonomy and 'closure': a systemic isolation of the legal system from such things as politics and culture" [McBarnet and Whelan, 1992, p. 81].

asserted that such a distinction was implicit in tax law, but the agency's relative lack of authority meant that its interpretation was not generally accepted. The House of Lords accepted the Revenue's analysis in *Coltress* [1881], but within a decade the court institutionalized a reconnection between profit measurement for income tax and commercial accounting purposes. This did not represent a dramatic about-face or the loss of regulatory control by the Revenue. Instead, it reflected judicial support for Revenue practices that rested on detailed sequences of regulated calculation that could be documented in written and examinable forms. Such judicial support and sequences of regulated calculation are features of British income tax that emerged during the second half of the 19th century.

Today we take it for granted in a UK context that taxable profits and distributable profits are regulated concepts that are legally distinct [e.g. Edwards, 1976; Freedman, 1987, 1997; Whittington, 1995]. The *Gresham* [1892] decision provided settled law that a tax computation of profit *starts* with a measurement of profit based on "ordinary principles of commercial trading" [Freedman, 1987; Boden, 1999, p. 46]. Thereafter, adjustments are made in accordance with tax law to arrive at a measurement of taxable profits. The extent to which the commercial measurement of profit requires adjustment for tax purposes remains a matter of legal and policy debate. One of the biggest problems of tax practice is the extent to which the law, and particularly the courts, will be guided by accountancy practices [Tiley and Collison, 1999, p. 340].² Freedman [1987] argues that the courts have adopted a "see saw" attitude to the extent to which they are willing to be guided by accountancy practices.

Existing literature in accounting and legal history tends to start from an understanding of the modern relationship between tax law and accounting practice and pay little attention to the

² UK courts currently approach the problem by looking first "to see what accountancy says and then see whether any rule of law contradicts it" [Tiley and Collison, 1999, p. 340]. Recent case law suggests that judge-made law could not override "a generally accepted rule of commercial accountancy which (a) applied to the situation in question, (b) was not one of two or more rules applicable to that situation, and (c) was not shown to be inconsistent with the true facts or otherwise inapt to determine the true profits or losses of the business" [Ibid.]. The Inland Revenue has stated that it "will accept a generally accepted accounting practice which does not violate any rules of tax [Inland Revenue, 1995]. Sect. 42 FA 1998 requires Schedule D Case I and II profits to be computed on an accounting basis that gives a "true and fair view," and places even more reliance on commercial accounting; see CCH [2000, pp. 952-405].

emergence of a legal and practical understanding of the connection between the two forms of regulated calculation. Further, most literature rests on an acceptance of the "essential difference" between the two measures of profits. As income tax was introduced in 1799 before generally accepted principles of commercial accounting existed, Edwards [1976, p. 302] argues that tax authorities were "obliged" to devise "their own rules" for calculating profits. He goes on to argue that commercial accounting did not follow the lead of income tax accounting because the separate purposes of taxable profit measurement and commercial profit measurement were clearly understood [p. 300]. Freedman [1997, p. 32] argues that "[a] culture was created in which a divergence of taxable profits from accounting profits could evolve without causing any great surprise". In other words, it became "natural" for tax calculations and accounting calculations to be different. In this paper, it is argued that such divergence was constructed and recognized relatively slowly.

There have been many contextual studies of 19th century profit measurement in the UK [e.g. Reid, 1987; Edwards, 1989; Bryer, 1991, 1993, 1998; Maltby, 1999], but few examine interrelationships between tax and accounting in much detail. Edwards [1976] is an exception, and he studies tax influence on the development of capital expenditure accounting.³ His work considers how tax capital accounting rules influenced commercial accounting profit measurement. Edwards [1976, p. 314] concludes that:

... early tax law and practice retarded the development of accounting theory, both directly through the incentive provided to write off capital expenditure to revenue, in the year that the outlay occurred, in order to increase the likelihood of attracting some relief, and indirectly through the implied official approval for the failure to depreciate a wide range of capital assets.

Watts and Zimmerman [1979, p. 45] consider tax influence in some detail and argue that the 1878 tax depreciation allowance was an important cause of the development of depreciation accounting theory. Bryer [1993, p. 657] refutes this by demonstrating earlier use and acceptance of depreciation accounting,

³ Edwards [1976] considers three tax depreciation cases examined in this paper: *Forder*, *Knowles*, and *Coltness*. He seeks to trace the pattern of tax influence on commercial capital accounting from its origins to the modern period.

but in turn highlights another way in which capital accounting interacted with tax practice, viz. valuation adjustments.

Lamb [1997b, Ch. 6; 2001] presents evidence that commercial calculations of profits were accepted as taxable profits for the early British income tax [1799-1816], as well as after the tax was reintroduced in 1842. This is acknowledged by other authors [e.g. Edwards, 1976]. In the paper that follows, it is argued that the introduction of “their own rules” by the tax authorities was problematic and gradual, and the distinction between profits for tax purposes and profits for other purposes was accepted slowly. A distinction of purpose was only gradually confirmed by the judgments of the courts in the late 19th century. Further, it will be argued, this process of changing rules and understandings of the relationships between tax and accounting was an integral part of the construction of modern regulatory control by British income tax authorities.

Dealing with Depreciation in Tax and Commercial Accounting: Depreciation was a significant theme of early income tax cases [CIR, 1878b, pp. liv-lvi]. The tax authorities’ disallowance of depreciation deductions was a major source of grievance among taxpayers. The cases reveal the arguments and forms of analysis employed by taxpayers, the Commissioners, the Revenue officers, and the judges. The concept of depreciation and the practices required to measure it were unsettled in the 19th century [Brief, 1965; Edwards, 1989; Parker, 1994]. No generally accepted concept of depreciation, together with associated practices, existed when British income tax was introduced in 1799. As the income tax developed, so too did accounting for depreciation. It is relevant to examine how regulatory control of income tax was constructed in the context of changing and contested commercial accounting practices.

The nature and significance of depreciation accounting is contentious among accounting historians. It is common ground, however, that accounting practices for dealing with the capital cost of assets were not uniform, but varied between businesses, even businesses in the same trade. Edwards [1989, pp. 114-115] distinguishes between “repairs and renewals accounting”, “replacement accounting”, and “depreciation accounting” — all widely used in the 19th century. The latter is closest to modern generally accepted practices of depreciation accounting based on systematic periodic allocation of fixed asset cost as a charge against profit. One strand of historical analysis links the variability of depreciation practices to a failure to distinguish

systematically between capital and revenue expenditure [e.g. Brief, 1965; Baldwin and Berry, 1999].⁴ Another strand of historical analysis does *not* explain the variability in the forms of accounting for capital expenditure by reference to a failure to distinguish systematically between capital and revenue. Napier [1990], for example, finds that the changing pattern of depreciation practices is related to the commercial development of the business.⁵ Elsewhere, Napier [1997] suggests that variability may relate to the extent that the practices of aristocratic landowners persisted in particular lines of business.⁶ Bryer [1991, 1993] places more emphasis on dividend or profit manipulation explanations for variability in depreciation practices.⁷

⁴This failure, Brief [1965, p. 14] argues, explains why 19th century British company financial reports have a propensity to contain a degree of "accounting error." Baldwin and Berry [1999] present some support for this view, but acknowledge the contentiousness of size estimates and the nature of errors. They note [p. 93] capital accounting practices for four coal and iron companies: three amortised the capital cost of fixed assets over the estimated useful lives of the particular assets, and a fourth adopted replacement accounting.

⁵Napier [1990] notes, in the case of P&O, that "[t]he notion of capital maintenance adopted . . . cannot . . . be easily labelled as a physical capital maintenance or a financial capital maintenance one" [p. 42]. The company had an "ambivalence regarding the function of depreciation" [p. 43], and adopted a primary understanding of depreciation as a source of funds for asset replacement and a secondary view of depreciation as a method of dividend smoothing involving the creation of secret reserves.

⁶Napier [1997, p. 3] explains that some forms of capital accounting practised by aristocratic landowners in the late 18th century persisted a century later: "[M]any companies, particularly those like canals and railways . . . , were accounted for as if they had some of the characteristics of aristocratic estates".

⁷Bryer [1991], analysing railway accounting, notes that "by the early 1840s the principle of charging depreciation on rolling stock . . . was widely understood by those professionally interested in railways" [p. 448]. Abandonment of depreciation during the "mania" of the mid-1840s and the hard times that followed led to the payment of dividends from capital. Bryer interprets the change as part of a "swindle" "orchestrated . . . by the 'London wealthy' on the manufacturing and middle classes, who were lured into investing in railways during the 'mania'" [p. 483]. As the price of stocks fell, the London wealthy invested heavily in the railways. The adoption of replacement accounting rather than depreciation accounting in the last half of the 19th century can be seen as a way of understating disclosed profits and staving off attempts by the state to regulate railway profits any further [pp. 476-477, 483]. Bryer [1993] argues that "cost-based accrual accounting," which "encompasses both conventional historical cost accounting and replacement cost accounting" [p. 649, fn.] was generally agreed among leading 19th century accountants. Depreciation as the cost of consumption and replacement of the use-values of assets is central to cost-based accrual accounting [p. 655] and systematic depreciation accounting was in widespread use by 1880 [p. 674].

The courts had an important role in articulating capital accounting, because they were required to adjudicate disputes under company law of permissible dividend payments. Dividends could be paid out of “profits” but not out of “capital,” and the courts had to consider how “depreciation” affected each of these measures. The company law doctrine of capital maintenance was a judicial construction rather than a specifically enacted rule [French, 1977]. Bryer [1998] argues that a conceptual understanding of the “laws” of accounting (“capital-revenue accounting”) was shared by accountants and judges, and contrasts his conclusions with the prevailing view that “consistent concepts of asset valuation and income determination are not evident” [Reid, 1987, p. 247]. Bryer argues that the judicial capital maintenance rule, underpinned by the requirement to pay dividends from revenue, required capital-revenue accounting. This requirement was enforced by judicial decisions until judges in *Lee v. Neuchatel* [1888/89] refused to set aside a company’s own constitutional rule that permitted the payment of a dividend to reduce “fixed” capital.

Accounting historians have examined the dividend cases, and in particular *Lee*, to understand how and why the courts adopted the positions that they did on commercial accounting regulation. Inasmuch as it relied on Adam Smith’s distinction between “fixed” and “circulating” capital [Smith, 1776, Bk. 2, Ch. 1], Napier [1997, p. 3] interprets *Lee* as a reflection of judicial attitudes “grounded in aristocratic approaches towards capital and income in the context of landowning.” French [1977, p. 306] interprets the court’s behavior as “an exercise of judicial law reform” superimposed on a longstanding pattern of judicial law making with respect to capital maintenance rules. He argues that the judges’ intention was to “create economic freedom for businessmen in dividend matters” [p. 318], but that they did so in a manner that allowed them to respect case precedent: they created “new definitions” and insisted that “each of the old rules said a separate thing”. Bryer [1998] also explains the court’s decision in *Lee* as an expression of new sensibilities of economic efficiency. He argues that the decision reflected the judges’ awareness that the interests of social capital might be better served if it was free to move to better investment opportunities. Maltby [1999] follows Bryer’s line of argument, but suggests that “it might have been expected that the courts would have provided authoritative and realistic guidance about the determination of profit” [p. 36]. She interprets the courts’ failure to provide such guidance as “a slump in judicial self-confidence when

it came to determining accounting rules" [ibid.].

These accounting historians offer insights into the analysis of the tax depreciation cases. It is possible to relate the courts' discussion of the appropriate treatment for tax purposes of depreciation attributable to wear and tear, exhaustion of capital, obsolescence, or other losses in value to the development of such accounting practices in other contexts. The tax cases may also offer accounting historians with new clues to solve persistent puzzles of 19th century commercial profit measurement.

BACKGROUND TO THE DEPRECIATION CASES

Legal Basis of Income Taxation: The 1842 Act "for granting to Her Majesty duties on Profits arising from Property, Professions, Trades, and Offices" [5 & 6 Vict., ch. 35] was the legal basis for income tax in the late 19th century. In most significant respects, this was a re-enactment of the income tax introduced in 1799 to serve as a war tax; modified substantially in 1803 to improve its effectiveness; and retired in 1816 once the Napoleonic Wars were over. The tax applied to individuals and legal persons, such as companies.⁸ Three technical principles of the tax were decisive for its ultimate success: a source concept, compulsory self-assessment, and tax stoppage at source [Grossfeld and Bryce, 1983, p. 224].

Income tax was a Crown tax, approved by Parliament for a fixed time: initially in 1842 for three years; then seven years; and subsequently, usually one year at a time. By 1875 British income tax was acknowledged to be *de facto* permanent [op. cit., p. 223; Sabine, 1966, p. 111]. In the early Victorian period this tax was known as the "property tax". As Sabine [1966, p. 42 fn] noted, "even down to the present day, there has been a certain confusion about the terms property tax and income tax. The title 'Income Tax Acts' was not introduced until quite late in the Victorian era". We will refer to the "income tax" throughout this paper, but its early characterization as a "property tax" echoes through the legal analysis of the depreciation cases.

The source principle of income tax meant that different detailed principles of measurement and collection of tax would apply depending on the income source (referred to as a "Schedule") [Boden, 1999; Lamb, 2001, p. 291]. Tax law identified two

⁸In 1965 a separate Corporation Tax was introduced to tax the profits of British companies. Under this tax, many of the principles of income tax continue to apply in measuring profits chargeable to corporation tax.

main types of business profits: profits derived from trade ("Schedule D Case I")⁹ and profits derived from the exploitation of land ("Schedule A No. III").¹⁰ "Trade" was a term that covered a wide range of enterprises from the great commercial concerns like the East India Company to the new industrial manufacturers to small shopkeepers. Schedule A No. III enterprises included mining companies, most public utilities, and the railroads. In the rest of this paper, the labels "Schedule D" and "Schedule A" will refer to these specific types of businesses.

Deduction of income tax at source operated where possible. This meant that tax was collected "from persons not directly interested in its payment, and evasion was reduced because the tax was deducted before the income reached the ultimate proprietor" [Soos, 1995, p. 49]. Recognition of income and deduction of tax at source were problematic for profits [SC, 1852a, q. 373-386, Pressly; Lamb, 2001, pp. 287-288]. Income tax on profits was ascertainable only after calculation and assessment.

Schedule D and Schedule A businesses had to file tax returns. In the words of the legislation, profit-making businesses were obliged to: "prepare and deliver . . . a true and correct Statement in Writing . . . containing . . . the Amount of the Profits or Gains arising . . . from all and every the Sources

⁹Under 5 & 6 Vict., ch. 35, s. 100 there were six "cases" of Schedule D. It is Schedule D, Case I that is most relevant to this paper: "Duties to be charged in respect of any Trade, Manufacture, Adventure, or Concern in the Nature of Trade, not contained in any other Schedule of this Act." The other Schedule D cases were: II "... Professions, Employments, or Vocations . . .;" III "... Profits of an uncertain annual Value . . .;" IV "... Interest arising from . . . Foreign Securities . . .;" V "... Foreign Possessions . . .;" and VI "... any annual Profits or Gains not . . . charged by virtue of any . . . other [Case or] Schedule . . ."

¹⁰There were three types of rules that applied to land revenues. Schedule A, No. I related to land generally — if it did not fall into a more specialised category — and it was assessed as an "annual value," usually understood to be rent. Schedule A, No. I is the category often referred to as Schedule A [e.g. Daunton, 2001, p. 185], but such description risks missing subtle but important distinctions. There were two specialised Schedule A categories. Schedule A, No. II applied to tithes in kind, ecclesiastical dues, manors, fines, and other profits from land. Schedule A, No. III applied to "commercial enterprises derived from the exploitation of land." It is this last category of Schedule A that is most relevant to this paper. 5 & 6 Vict., ch. 35, s. 60 deems the "annual Value" for such "Properties" to be "the full Amount for One Year, or the Average Amount for One Year, of the Profits received therefrom within the respective Times herein limited. Of quarries . . . , of mines . . . , of ironworks, gasworks, . . . waterworks, . . . canals, . . . docks, . . . railways and other ways, . . . and other concerns of the like nature, from or arising out of any lands, tenements, hereditaments, or heritages . . ."

chargeable . . . , according to the respective Schedules" [5 & 6 Vict., ch. 35, s. 52]. To this statement, the taxpayer was obliged to add a declaration that taxable income was "estimated . . . after setting against or deducting from such Profits or Gains such Sums, and no other, as are allowed by this Act" [ibid.].¹¹ Tax law specified rules to calculate assessable profits. One type of rule determined if profits were recognized for a particular one-year period, or if profits were the average profits of a longer period. Schedule D trading concerns were taxed upon "a fair and just Average of Three Years." Under Schedule A, mining concerns were taxed on the basis of five years' average profits, while other Schedule A trading companies were taxed on the basis of profits in the preceding year. "Profits" were stated to be taxable, and there were numerous rules listing costs that would *not* be regarded as acceptable deductions from profits — some very abstract and general, others quite specific [see Figure 1].

Income Tax Practice — Administration: Income taxation was formally a system of self-assessment, but taxpayers were accountable to tax administrators with legal and practical powers to enforce taxation and collection. Two administratively distinct bodies of tax officials had responsibilities for income tax in 19th century Britain. Local Commissioners and their clerks and collectors formed one body, while local Surveyors, their supervisors and other officials¹² of the central Inland Revenue formed the other. These were not institutions of equal size. As Dauntton [2001, p. 192] notes, "What stands out in the mid-nineteenth century is the small scale of the [Revenue] bureaucracy required by the income tax". In the 1860s Revenue officers numbered less than 400, whereas the body of local Commissioners and all of their officers numbered more than 50,000 [op. cit., pp. 188, 192]. Lamb [2001, p. 281, Fig. 1 and related text] discusses the responsibilities of and relationships between these officials. Sovereign powers to tax and regulate the taxpayer belonged to local Commissioners who were powerful public officials independent of central government [Lamb, 2001]. *Ex post facto*, the Revenue is identified as the creator of tax rules and practices [Edwards,

¹¹ The tax return required of a mining company in 1878 is reproduced in Coltness, 1881, pp. 302-304.

¹² Surveyors were the 19th century equivalent of modern H. M. Inspectors of Taxes. Special Commissioners were central Inland Revenue employees who could act in place of local General Commissioners in certain circumstances if the taxpayer so wished.

FIGURE 1

Rules for the Calculation of Schedule D Profits

Rules for Trading and Professional Profits	
1 st	<p>"In estimating the Balance of the Profits or Gains . . . ,"</p> <p>[i] "no Sum shall be . . . deducted from . . . such Profits or Gains, for any Disbursements or Expences whatever, not being Money <i>wholly and exclusively</i> laid out or expended for the Purposes of such trade . . . ;"</p> <p>[ii] "nor for any Disbursements or Expences of <i>Maintenance of the Parties</i>, their Families or Establishments; . . ."</p>
2 nd	Profit and gains arising from property occupied by the trade will be dealt with under <i>Schedule A</i> . . .
Rules for Trading Profits Only	
1 st	Tax was "to be charged . . . on a Sum not less than <i>the full Amount of the Balance of the Profits or Gains of such Trade</i> . . . , and shall be assessed, charged, and paid without other Deduction than is herein-after allowed"
2 nd	Tax " <i>shall extend to every Person, Body Politic, or Corporate, . . . Company, or Society, and to every Art, Mystery, Adventure, or concern carried on by them . . . in Great Britain or elsewhere</i> " except such businesses or properties as were charged under Schedule A," i.e. income from land and businesses based on the exploitation of land - mines, roads, railways, canals, water-works, etc.
3 rd	<p>"In estimating the Balance of Profits and Gains chargeable . . . , no Sum shall be. . . deducted from . . . such Profits or Gains . . ."</p> <p>[i] "on account of</p> <ul style="list-style-type: none"> • any Sum expended for <i>Repairs of Premises</i> occupied for the Purpose of such Trade . . . ," • nor for any Sum expended for the Supply of <i>Repairs</i> or Alterations of any <i>Implements, Utensils, or Articles</i> employed for the Purpose of such Trade . . . beyond the Sum usually expended for such purposes, according to an Average of Three Years preceding the Year in which such Assessment shall be made"; <p>[ii] "nor on account of <i>Loss not connected</i> with or arising out of such Trade . . . ;"</p> <p>[iii] "nor on account of any <i>Capital withdrawn</i> therefrom;"</p> <p>[iv] "nor for any Sum employed or intended to be employed as <i>Capital</i> in such Trade . . . ;"</p> <p>[v] "nor for any Capital employed in <i>Improvement of Premises</i> occupied for the Purposes of such Trade . . . ;"</p> <p>[vi] "nor on account or under Pretence of any <i>Interest</i> which might have been made on such Sums if laid out at Interest;"</p> <p>[vii] "nor for any Debts, except <i>bad Debts</i> proved to be such to the Satisfaction of the Commissioners respectively;"</p> <p>[viii] "nor for any <i>average Loss</i> beyond the actual Amount of Loss after Adjustment;"</p>
4 th	"In estimating the Amount of the Profits and Gains . . . no Deduction shall be made on account of any annual Interest, or any Annuity or other annual Payment, payable out of such Profits or Gains".

Source: 5 & 6 Vict., ch. 35. sect. 100, *italics added*.

1976] and capable of governing taxpayers through a nexus of disciplinary technologies [Preston, 1989].

Until the Revenue gained *de facto* power to assess tax and determine the liability through procedure, local Commissioners were habituated to exercise their sovereign powers to estimate tax liabilities based on local knowledge and their discretion, as well as force a substantial proportion of taxpayers to appear in person before them for judgment and assessment [Lamb, 2001]. Revenue officers were more inclined to gain knowledge of taxpayers through the collection, creation, and analysis of written evidence [ibid.]. In 1848 the Inland Revenue was formed by a merger of the Board of Stamps and Taxes with the Board of Excise [CIR, 1885, p. 95]. The Excise, the model professional department of 18th century tax administration [Brewer, 1989, Ch. 4], was a highly centralized, effective department by the mid-19th century, and its practices helped strengthen central government administration of the income tax. By the 1860s the income tax had been recognized as *de facto* permanent part of the department's workload [Sabine, 1966, p. 90]. By 1870 civil service reform had begun to professionalize the Revenue: appointment was by open competition [CIR, 1885, p. 100] but formal exams were still some years away. Thus, by the 1870s the Revenue had the organizational means, skills, and time to devote to asserting its technical authority over income tax. Its technical practice could be characterized as resting on close reading of the law and local officers worked under the sometimes "crushing nature" of supervision by central Inland Revenue officials [Riddell, 1887, pp. 109, 131]. In this specific arena of government, as in a more general sense, administration was becoming "too complicated to be left to part-time and unqualified squires" [Hobsbawm, 1969, p. 203].

In general, the forms of power employed by local Commissioners and Revenue officers complemented each other. However, they represented different modes of governance, effectively in a competition for *de facto* control of the taxing process [Lamb, 2001].¹³ Revenue techniques and procedures would not

¹³ Dauntton [2001, Ch. 7] describes the administration of British taxation, 1842-1914, as dependent "on a hybrid system of lay and professional administrators" [p. 188]. His work describes the administrative system in its broader political and comparative context, but he presents the interaction between local Commissioners and Revenue officials as essentially co-operative. In this paper, we consider the competitive aspects of such interaction somewhat more than Dauntton does.

dominate practice until the local Commissioners relinquished *de facto* control of the taxing process and the judiciary began to reinforce standardized techniques of legal interpretation. The shift of *de facto* regulatory power from the local Commissioners to the Inland Revenue occurred gradually [Stebbing, 1994, p. 66]. Not until the 20th century was the Revenue recognized as controlling local tax administration, leaving the Commissioners to function as a judicial tribunal [Sabine, 1966, p. 155; Stebbings, 1993].

Income Tax Practice — Recognition of Profits: Local tax authorities had the power to scrutinize and evaluate self-assessments of profits and to make their own assessments in the absence of adequate tax returns. Taxpayers' concerns about the invasion of their privacy by this process, especially when conducted in their local community by neighbors, led politicians to legislate secrecy provisions for income tax, which were especially generous in protecting the privacy of Schedule D Case I taxpayers; such provisions helped maintain relatively high acceptance of the tax and voluntary compliance [Stebbing, 1998; Daunt, 2001; Lamb, 2001, p. 291]. Taxation of income by source amounted to piecemeal taxation. Local tax authorities had an obligation to assess the profits of businesses located in their jurisdiction, but they had limited rights and occasions for enquiring into or reviewing a taxpayer's total income. In consequence, tax authorities lacked knowledge of the taxpayer because they could not calculate, nor require the taxpayer to calculate, *total* taxable income.

The problem was not that calculation per se was impossible nor never done for income taxation, but that a totalizing calculation consistent with the concept of the taxpaying person was not yet generally enforceable or verifiable [Lamb, 2001, p. 294]. Profits were particularly difficult for tax authorities to judge because the outward signs of *local* profitability — or the lack thereof — were unreliable or inadequate indicators of the taxable entity's total business profits. During the course of the 19th century, businesses generated profits from an increasingly complex and geographically expansive set of activities. Documentary summaries became increasingly important for the calculation of profits. Although the law included detailed provisions for the calculation of profits, recognition of taxable profits was not a simple matter of applying the law.

The words of income tax legislation suggest a calculative regime that was well defined and precise, in which allowable

deductions were carefully, and sparingly, specified. The suggestion is misleading for two reasons. First, tax law treated trading profits as a precisely calculable part of total income, but nowhere was the term "profits" defined [Edwards, 1976; Freedman, 1987]. Legislation did not make clear if "profits" meant "net profits" or "gross profits", nor was the relationship, if any, between taxable profits and profits for other purposes made clear. In particular, tax legislation did not itemize which costs were deductible in calculating profits. Second, taxpayers and local tax officials ignored even those rules that were specific and clear [e.g. SC 1861, qs. 2201-2208; Edwards, 1976, p. 303; Lamb, 1997a]. In practice, it was rare for a business to disclose more than the amount of net profits for the relevant accounting period. If the taxpayer swore an oath that the amount was accurate, many General Commissioners felt bound to accept the truthfulness of the statement [SC, 1861, q. 2199 (Welsh)].

The relative invisibility of profits and the vagueness of the law made it difficult for honest taxpayers to know what amounts to report on their returns. Till, Clerk to the Commissioners in London, observed that "it is not every body who understands all the Act; there is not one man in a hundred that reads the enormous paper that is sent round to him" [op. cit., q. 1962]. The Revenue acknowledged that many taxpayers were unfamiliar with the law [op. cit., qs. 2201, 2208 (Welsh)] and reminded its Surveyors that the inadequacy of reported profits "may have arisen either from the return being made upon an estimate instead of on figures taken from books showing the actual profits, or from erroneous views as to deductions claimable, or from some unintentional misstatement" [CIR, 1873, p. 35].

Despite the very detailed income tax law, practice was based on estimation rather than precise calculation. The Revenue designed and distributed return forms to elicit written, examinable, and standardized knowledge of taxpayers. Many local tax officials judged that getting an equitable approximation of what was intended by Parliament was the more important, and the only feasible, aim. Inland Revenue officials, however, were trained to enforce the letter of the law. There was tension between the two bodies of tax officials, and Revenue officials frequently made clear their belief that income tax administration as a whole could be improved if more authority was given to its officers [Lamb, 1997b, pp. 238-258; Daunton, 2001, Ch. 7].

Income Tax Practice — Political Lobbying: By the mid-19th century, complaints about a broad range of tax problems were

referred to Parliament and to the central tax authorities by individuals, as well as by organized groups. Many problems were raised in Parliamentary debates of budget bills. Two Select Committees were established to consider evidence and form an opinion if income tax reform was desirable and feasible.¹⁴ The Hume Committee was set up in 1851 to consider the possible reform of income tax, but did not make firm proposals. However, its reports [SC, 1852a, 1852b] document the evidence of lawyers, actuaries, political economists and *one* accountant. Evidence was presented on the nature of profits, especially the profits of mines, and the extent to which annuities combined a return of capital and income.

In 1861 the Hubbard Committee was given a similar brief, but its more particular purpose was to consider a proposal by the Chairman to tax profits after equitable deductions. Essentially, businessmen in some industries asserted that their commercial “clear profits” were different, and lower, than the profits that were subject to income tax. Also, Schedule A businesses perceived themselves to be taxed more heavily than Schedule D trading concerns. Hubbard noted two defects of the current tax:

Industrial earnings are taxed to their full extent, although their dependence on the life and efficiency of those whose labour is indispensable to their production requires that a considerable portion be annually saved; such portion, when invested as capital, being again taxed on its subsequent products [and], capital, in the course of realisation through the working of mines, is taxed in the assessment of the entire value of their produce [SC, 1861, pp. x/xi-11].

Evidence was presented to demonstrate that mining companies were permitted no allowance for the extraction of mining deposits. This was regarded as taxation of capital, rather than income.

Daniel Gooch, engineer to the Great Western Railway Company (GWR), gave evidence to the Select Committee [SC, 1861, qs. 4083-4178]. GWR, which had its head office in London, had interests in Welsh iron and coalmines, and used its railways to convey mined products to markets elsewhere in Britain. Gooch explained that GWR deducted income tax at source from the royalties paid under mining leases. Both this tax and the tax on

¹⁴ See Dauntton [2001, Ch. 4] for a discussion of the context for and issues discussed by the Hume Committee [pp. 69 fn., 91-92] and the Hubbard Committee [pp. 93-94].

the company's own mining profits had to be paid over to the tax authorities. Under Schedule A No. III rules, tax was payable on the "whole value of the mineral . . . which generally includes the royalty" [q. 4092]: in other words, the value of the annual produce of the mine with no deduction for working charges or royalties paid.

Soon after it had commenced operating one North Wales mine, GWR had made a return to local tax authorities of the "earnings of the colliery, and the actual balance due to the proprietors of that colliery after paying the working charges." Gooch terms this "a mercantile balance, which we considered a dividend amongst our shareholders" [q. 4093]. The local Commissioners refused to accept the deduction of working charges and royalties. Gooch explained:

[C]laims such as those of the railway company for freight and delivery, and of the corporation of London for dues, must not be deducted from produce; but that the company, as miners, under Schedule A., must pay tax upon an estimate of the value at the pit's mouth of the coal raised, and not as traders, upon the actual produce, less expenses of conveyance and sale [q. 4094].

The method of calculation of taxable profits was one source of GWR's grievance, but the process of assessment presented another. Gooch agreed with Hubbard that local officials "seem to disregard any evidence you can produce in the way of your own account keeping, and they levy the tax upon an arbitrary system, and upon the principle of getting as much as they can" [q. 4102]. He went on that they "actually repudiated altogether our accounts, showing the actual sales, which were as clearly and accurately kept as accounts can possibly be kept, and which were open to them if they wished to go through them" [ibid.]. He noted further problems when GWR tried to appeal to authorities outside the Welsh locality. As Gooch explained:

[W]e wished to show our accounts rather to the [Special] Commissioners in London than to the local Commissioners, who were simply coal-owners as well as ourselves, or were employed in working collieries; and therefore we preferred exposing our affairs to the Commissioners in London; we were assured that that could be done, but afterwards we found that it could not be done [q. 4094].

If the GWR mining business had been treated as a trade assessable under Schedule D Case I, then there would have been no

difficulty in making an appeal to the London Special Commissioners. This procedure would have avoided the unwelcome disclosure in the local tax office of the company's financial affairs to Welsh competitors.

As was the case with the Hume Committee, the Hubbard Committee could agree no recommended action. Its report provides detailed reasons for the differences of opinion that split the Committee. However, evidence before the Committee most likely influenced one change in legislation [SC, 1861, qs. 4169, 4193]: in 1866 Schedule A No. III was "transferred" to Schedule D [29 *Vict.*, ch. 36, s. 8]. Our review of the depreciation cases below reveals that it took 25 years to determine just what this "transfer" meant.

Income Tax Practice — Appeals: Until 1874 taxpayers and local Surveyors possessed rights to appeal against assessments only to the local Commissioners themselves. The local process of assessment and appeal attempted to mediate disagreements and solve problems. If, after an appeal, the taxpayer was dissatisfied, it was not very clear what steps could be taken; the decisions of local Commissioners were final and there was no formal direct right of appeal to the courts. In some cases, taxpayers asked the Treasury or Board of Inland Revenue to consider their cases; such applications were usually refused [SC, 1861 (Pressly)]. In a few instances, the Attorney-General took income tax cases, but only if the subjects were fundamental to taxing practice.¹⁵

In 1874 a procedure for income tax cases to be stated for consideration by the High Court or Court of Session was introduced. Thereafter, a taxpayer or Surveyor who was dissatisfied with an appeal decision by the Commissioners could demand that the matter be considered by the courts.¹⁶ Between 1874 and

¹⁵This inference is clear if one considers the pre-1874 income tax precedents referred to in the early income tax cases. See also Grout and Sabine [1976, p. 75].

¹⁶The High Court of Justice had jurisdiction over such appeals in England and Wales, while the Court of Session fulfilled equivalent judicial functions in Scotland. The right to appeal to the Superior Court of Exchequer had existed for Assessed Taxes, for which there was quite a large body of decided cases [Sabine, 1966, p. 105]. It is assumed that the change was part of the major reform of courts under the Judicature Act of 1873. It involved uniting the jurisdictions of the existing separate superior courts of law and equity (including the Exchequer); providing for "cheapness, simplicity and uniformity of procedure;" and "the improvement of the constitution of the courts of appeal" [Manchester, 1980, p. 148].

1878 16 income tax cases were heard by the High Court or Court of Session [CIR, 1878b, pp. liv-lvi]. Full reports of the judgments were circulated to General Commissioners and to officials of the Revenue. These 16 cases were a small fraction of the cases involving a dispute between taxpayers and tax officials.

In 1878, the possibility of further appeals to the Court of Appeals and the House of Lords was introduced. [In Scotland, the Inner House of the Court of Session acted equivalently to the English Court of Appeal.] As with the 1874 change, the specific reasons for the introduction of new appeal rights remain unclear [Stebbing, 1996, p. 616]. Only a very small number of tax cases reached the Lords in the period 1878-1904 [Grout and Sabine, 1976, pp. 77-79]. Appeal was most frequently initiated by taxpayers, but the Crown had a higher percentage of successful cases [ibid.].

Appeals could proceed to the courts on matters of law, not matters of fact. In a modern context, calculation is usually treated as a matter of fact not law, but the distinction can be difficult [McMahon and Weetman, 1997]. In the late 19th century, the tendency to treat calculation as a factual matter was even less clear. When judging legal cases, British courts have a long tradition of formalism. Literal interpretation was the norm, but the "golden rule" of ordinary meaning and grammatical construction, was well established as a rule of interpretation by the mid-19th century.¹⁷

THE DEPRECIATION CASES

As Daunton [2001, p. 19] argues in relation to 19th century British taxation: "The definition of income itself was socially constructed". The courts — as arenas for the negotiation of meanings by other actors and where judges were actors themselves — were important sites for the construction of meanings. In the seven depreciation cases considered below, we can obtain an understanding of how the meanings of "income" as distinct from "capital," as well as of "profits" and "depreciation," were contested and how authoritative meanings within particular contexts emerged. These seven include *all* cases reported

¹⁷ Pollock, C. B.'s judgement in the case of Attorney-General v Hallett [1857] 2 H&N 368 at 375 established the precedent that "[t]he court will depart from a literal interpretation where to keep to such an interpretation would lead to a result which is so absurd that it cannot be supposed, in the absence of express words which are wholly unambiguous, to have been contemplated" [Tiley and Collison, 1999, pp. 17-18].

between 1874 and 1878 [*Addie, Forder, Knowles*] where issues of depreciation are considered in the context of a Schedule D or Schedule A profit-making business [see Lamb, 1997b, Table 7.1].¹⁸ The fourth case [*Coltness*, 1879, 1881] is the first reported case with similar content and context to be taken beyond the High Court level. The remaining cases [*Caledonian Railway*, *Burnley Steamship*, and *Leith Steam Packet*] are those reported after the introduction of a new law in 1878 that purported to settle the matter of depreciation, and that concerned the interpretation of similar content and context as in the earlier cases. No 20th century cases have been included in the analysis below because *Coltness* [1881] and *Gresham* [1892] provided authoritative meanings for the general taxing word “profits” and made clear its relationship to other words — “capital” and “depreciation.” After the depreciation cases considered in this paper [see Table 1], most changes in tax law were initiated by explicit new legislation. Also, after 1900 income tax and the “fiscal constitution”, as Daunton [2001] puts it, went through a period of significant reform.

In the 1870s the income taxation of Schedule D and Schedule A businesses was contentious, but there was insufficient political will to make significant changes to its form or incidence [Daunton, 2001, Ch. 6]. The evidence presented to the Select Committees and the political propositions debated within them reveal the heated reactions to the income tax despite the fact that in 1875 rates were lower than they had been in any year since the tax was introduced. At 2d. per pound (0.83%), the 1875 rate was trivial compared with levels reached in the 20th century; by 1879 the rate had more than doubled, but still stood at only 5d. (2.08%); and in 1897 the rate was 8d. (3.33%) [Lamb, 1997b, Fig. 5.3]. Economic development and changing organizational forms for commercial and industrial enterprises meant that Schedule D and Schedule A businesses were growing sources of income tax [Lamb, 1997b, Ch. 6 and Fig. 6.1; Daunton, 2001, Table 6.1]. These changes and the emerging distinctions between accounting and tax calculation, between practices in different parts of the UK, and between different types of

¹⁸ Full reports of these judgements were circulated to General Commissioners and to officials of the Revenue, and they were published in volume 1 of the Tax Cases [TC] series. The rest of the 16 reported cases in the period concerned other issues of “capital” vs. “revenue” expenditure [1]; the nature of profits and allowable deductions [4]; the geographical scope of UK income tax [4]; procedure [2]; the nature of income [1]; and appropriate schedular categorisation [1].

TABLE 1
British Income Tax Depreciation Cases

Case [Year decided]	Court	Business/Tax category	Substance of depreciation claims	Outcome of claims/Tax rules used for measurement
<i>Aldie & Sons, Re</i> [1875]	Court of Session - Exchequer - Scotland	Mining/ Schedule A No. III	<ul style="list-style-type: none"> Allocation of original cost (less residual amount) of mine buildings and plant over the useful life of the mine (called 'depreciation') Allocation of the cost of pit sinking over the useful life of the mine 	Not allowed / <i>Schedule D Case I rules</i> /
<i>Forder v. Andrew Handyside and Co., Ltd.</i> [1876]	High Court - Exchequer - England	Iron foundering/ Schedule D Case I	<ul style="list-style-type: none"> Depreciation of buildings, fixed plant and machinery over the useful life of the works 	Not allowed / <i>Schedule D Case I rules</i> /
<i>Knowles (Andrew) and Sons Limited v. McAdam</i> [1877]	High Court - Exchequer - England	Mining/ Schedule A No. III	<ul style="list-style-type: none"> Allowance for amount shown as 'depreciation' in accounts, but used to show shareholders the deterioration in the value of mines 'by reason of the coal gotten' 	Allowed on the basis that the claim was necessary to calculate 'profits' and it was not 'depreciation' in the same sense as other cases / <i>Schedule D Case I rules</i> / [NB Overruled by <i>Coltness</i> (1881) below]
<i>Coltness Iron Company v. Black</i> [1879]	Court of Session - Exchequer - Scotland	Mining/ Schedule A No. III	<ul style="list-style-type: none"> Allowance for pit sinking in arriving at 'profits' Wear and tear allowance under 1878 law for structures 	Not allowed under precedent, as the 1878 statutory wear and tear allowance applied only to plant and machinery / <i>Schedule D Case I rules</i> /
<i>Caledonian Railway Company v. Banks</i> [1880]	Court of Session - Exchequer - Scotland	Railway/ Schedule A No. III	<ul style="list-style-type: none"> Depreciation of rolling stock and machinery claimed in addition to repairs and renewals 	Not allowed because this company had maintained the value to the business of the relevant assets by way of repair and renewal. Wear and tear allowance or repair and renewals were seen as alternatives. Only if the value to the business was not maintained through repair and renewal would the 1878 allowance be relevant / <i>Schedule D Case I rules</i> /

TABLE 1
British Income Tax Depreciation Cases
(continued)

Case [Year decided]	Court	Business/Tax category	Substance of depreciation claims	Outcome of claims/Tax rules used for measurement
<i>Coltress Iron Company v. Black</i> [1881]	House of Lords	Mining/ Schedule A No. III	<ul style="list-style-type: none">Restated claim emphasised systematic write off over useful life of pit workings exhausted by extraction of minerals from mines	Not allowed because the law gave no allowance for exhaustion of capital and overruled <i>Knowles</i> (1877) above /Schedule A No. III rules/
<i>Burnley Steamship Co. v. Aikin</i> [1894]	Court of Session - Exchequer - Scotland	Shipping/ Schedule D Case I	<ul style="list-style-type: none">Depreciation of ship due to obsolescence	Although ships fell into the category of plant and machinery, the part of the claim that exceeded 'physical depreciation' was not allowed /Schedule D Case I rules/
<i>Leith, Hull, and Hamburg Steam Packet Co. v. Bain</i> [1897]	Court of Session - Exchequer - Scotland	Shipping/ Schedule D Case I	<ul style="list-style-type: none">Taxpayer claimed a higher rate of wear and tear allowance than had been allowed by the General CommissionersThe Commissioners accepted calculations designed to create a fund that would permit the owner 'to keep up his plant and replace it when it is worn out'	The higher claim was not allowed on the basis that the Commissioners had made a 'fair and reasonable' allowance on a matter of fact. /Schedule D Case I rules/

businesses created tensions within the taxing system and competing claims for how to interpret the taxing words. Through examination of the tax depreciation cases, we can see how some of these tensions were relieved and how meanings were constructed.

THE FIRST THREE CASES, 1874-1878

The variety of tax practice meant that there were real differences of interpretation of taxing words to resolve. The judgments in these three cases make clear that "depreciation" could not be deducted as an expense "expressly enumerated" in the taxing act, but it *might* be deductible if it fell to be treated as an essential component of the calculation of the "profits" of the enterprise. The cases confirmed, to an extent, the Revenue's view that income tax law modified the concept of "profits" used for other commercial and legal purposes.

Re Addie & Sons [1875]: The first income tax case was heard in the Court of Session in Scotland and was brought under the new appeal procedures. It concerned the depreciation provided by an ironstone mining concern and revealed the characteristic arguments of both parties to the appeal — the taxpayer and the Surveyor — and the judges. *Addie* also reveals the application of tax rules following the 1866 "transfer" of the Schedule A trading concerns to Schedule D: *Addie* was assessed under the rules of Schedule D Case I [see Figure 1], and expenditure on its property was classed as disallowable capital.

Addie & Sons, Coal and Iron Masters, appealed against an 1874 decision of the General Commissioners in Lanark. The firm had calculated its taxable profits after deducting "a percentage . . . for pit sinking and for depreciation of buildings and machinery": "[T]hey contended that the share of the gross annual receipts corresponding to the proportion of the cost of sinking the pits [appertaining] to the current year . . . was in no sense a profit, and that, therefore, it ought to be deducted from the gross annual receipts in arriving at the assessable profit" [p. 2]. Equally, they contended, the difference between the original cost of pit buildings and machinery and the "price or value obtainable" when the pits were exhausted "is in no sense a profit, and that consequently in arriving at the profits upon which they are assessable there ought to be deducted from the gross receipts of each year a sum corresponding to the share of that difference [appertaining] to such year" [ibid.]. "In no sense

a profit" was a phrase used regularly by taxpayers in this and subsequent cases.

In the original appeal the Surveyor had argued that neither deduction was acceptable because (1) "the Income Tax is an annual tax existing for one year only" and (2) "it is not lawful . . . to make any deductions except such as are expressly enumerated" [ibid.]. As the deductions claimed were "not enumerated in the Acts", the Surveyor argued, using the words of the tax legislation, that they were "expressly forbidden" [p. 3].¹⁹

The Scottish court dismissed the appeal because the deductions were claims for capital expenditure:

[T]he machinery and building connected with a pit appear to me to be just part of the pit itself. It is one compound structure, necessary for the working of the mine, and the question comes to be . . . [are] they entitled to deduct something on account of . . . an expenditure of capital. It is an investment of money, of capital, and must be placed to capital account in any properly kept books applicable to such a concern [p. 3].

The reference to "one compound structure" emphasizes the nature of the pit as capital or "property". The Lord President of the First Division then disallowed the expenditure: "[a]s soon as you ascertain that this is an expenditure of additional capital, there is an end to any proposal to deduct anything in respect of it" [p. 4]. In the absence of any specific legislative provision to the contrary, the fact that there was an "expenditure on additional capital" determined that there would be no income tax deduction calculated by reference to that expenditure, at the time of the expenditure or in the future. The court appears to have believed that once expenditure was made on capital account, there it should remain.

Forder v. Andrew Handyside and Company, Limited [1876]: The first English depreciation case to reach the High Court reveals

¹⁹ " . . . [I]n the Computation [of income tax, whether done by the taxpayer or the tax official], *it shall not be lawful to make any other Deductions therefrom than such as are expressly enumerated in this Act*; nor to make any Deduction on account of any annual Interest, Annuity, or other annual Payment, to be paid to any Person out of any Profits or Gains chargeable by this Act; . . . nor to make any Deduction from Profits . . . on account of Diminution of Capital employed or of Loss sustained in any Trade, Manufacture, Adventure, or Concern . . . " [5 & 6 Vict., ch. 35. sect. 159, italics added].

the contrast between the commercial attitudes of the Commissioners and the Surveyor's insistence on looking no further than legal words for meaning. The court's judgment makes clear the principle that there is no equity in a taxing statute, despite the judges' evident sympathy with the arguments of the taxpayer. The description "depreciation" in Handyside's accounts was enough to taint the expense as "capital" and bring it within the disallowances of Schedule D Case I.

Handyside, a firm of iron-founders, was assessed in 1874/75 to £8,642 "the amount taken from their own report, and therein specified at nett profits" [p. 65]. "Their own report" was a "balance sheet for the year ended on 31st July 1874, being their first year of trading" [ibid.]. The Surveyor appealed against an 1875 decision of the General Commissioners, which confirmed the assessment, on the basis that it permitted Handyside to deduct depreciation of buildings, fixed plant, and machinery in calculating its "nett profits." The Surveyor argued that depreciation was a deduction in respect of capital and therefore, disallowable. Further, as depreciation was not an expense expressly enumerated by the act, he argued, it was not allowed. He went on to say that repairs would have been allowed if Handyside had claimed them instead.

Handyside contended that it would be wrong to tax them on an amount equivalent to the depreciation charge: "inasmuch as such sum had no real existence, but was written off in the accounts in accordance with the articles of association, as the works must of necessity depreciate from year to year, and as the sum expended in repairs could not entirely replace such depreciation" [pp. 65-66]. The General Commissioners agreed with the taxpayer. In the case stated for the High Court, it was noted that: "[t]he majority of the Commissioners . . . being of [the] opinion that persons in trade were *equitably entitled* to write off from their profits each year a sum of depreciation, and that the amount claimed was *fair and reasonable*, decided in favour of the company" [p. 66; *italics added*].

In the High Court, the Chief Baron of Exchequer, unlike the General Commissioners, found no room for equity in the taxing act: "Whatever we may think of the justice and fairness as regards commercial or manufacturing interests . . . it is perfectly clear that . . . as regards Schedule D., the . . . traders, are not entitled to this deduction [for depreciation]. . . . The Act is quite explicit, and can admit of no doubtful or difficult construction . . ." [pp. 66-67]. His colleague Pollock, B. concurred [pp. 68-69]. Although the matter of the income tax deduction was settled as

far as he was concerned, he went on to consider the nature of depreciation:

It appears that by the articles of association . . . that a reserve fund is to be formed, and before recommending a dividend, and of course therefore before paying a dividend, the company, perhaps, very prudently and properly, agree to set aside a sum from the nett profits of the company, and bear in mind that . . . they are nett profits before . . . being . . . set . . . aside, and this is merely the mode in which they think fit to apply a portion of . . . their nett profits . . . as a reserve fund for the purpose of . . .” meeting contingencies, or of purchasing, improving, . . . restoring, . . . or maintaining the . . . property of the company, or for equalizing dividends [pp. 66-67].

Although Pollock, B. noted that repairs would be an allowable deduction, he expressed his concern that the reserve fund, to which depreciation had been transferred under Handyside’s articles of association, covered a number of purposes and he could not determine which it was in the particular case. He distrusted the description “depreciation” and believed it to be indeterminate. “[T]he question remains whether the Respondents are entitled to deduct this entire sum of [the depreciation charge], which may be applied anywhere or at any time they please for a great variety of purposes which are actually forbidden, directly as well as indirectly, by [the income tax law]” [p. 68].

Pollock, B. also tried to sort out the depreciation accounting:

Now there are three modes to which this fund to meet the depreciation of machinery may be dealt with — one is by adding to the company’s original capital what is called a depreciation fund; the second is by laying aside out of the annual profits which would be otherwise divisible among the shareholders a certain sum to meet the estimated depreciation; and the third is by waiting until the depreciation occurs, and then either repairing or reinstating the machinery so as to make it of equal value and efficiency to what it before was [p. 69].

Huddleston, B. added his comments on the accounting:

[The amount of the depreciation change] is a sum which a prudent person . . . would put by or lay aside for . . . meeting what might be called the expenses of renewal. The articles of association clearly contemplate

that it should be carried into the capital account as a reserve fund. The articles . . . contemplate that the company might make use of this money, but if they did it would be in the capital account . . . and it is quite clear that it would be treated for all purposes of book-keeping and for all usual purposes as capital. The Scotch case [Re *Addie & Sons*] . . . clearly includes that view [p. 70].

Kelly, C.B. addressed the problem of lack of precise information. Normally, a company would be allowed a deduction for repairs based on the average of three years. Handyside was to be taxed in respect of its first year of trading. Kelly, C.B. expressed the view that in such circumstances "you must get the best information that you can, and must judge from what has been done during that one year what will be the probable amount expended in the ensuing year" [p. 68].

The *Forder* case confirmed for the English courts that depreciation was a disallowable deduction in arriving at taxable profit because it related to capital expenditure. The case was notable for the judges' attempts to understand what depreciation meant in a particular business and in its accounts. Also, it articulated for income tax the court's opinion that there is no room for equity in the interpretation of the law; interpretation is of the words that are written in the legislation. Such judicial views about interpretation were used by the tax authorities as the basis for authoritative interpretations and instructions to local officials and officers, which in turn buttressed the growing disciplinary power of the central taxing authorities.

Knowles and Sons Limited v McAdam [1877]: The third depreciation case was heard by the English High Court in January 1877. It illustrates the willingness of the court to be persuaded by commercial arguments, provided the traps of legal meanings established through case precedent could be avoided. From earlier cases, "depreciation" had acquired a meaning linked to "capital," which was disallowable under certain express words of the Act. In this case, the courts preferred a commercial calculation of "profits" to the idea of "profits" as an abstraction distinct from other types of profits.

The company, which traded as proprietors of freehold and leasehold coal mines, appealed against an 1875 decision of the Special Commissioners that disallowed the company's claim for depreciation on the grounds that it was a deduction in respect of capital expenditure. At the appeal hearing before the Special

Commissioners, the company was represented by one of its directors, David Chadwick MP. In the case stated for the High Court, it had been noted that:

... Mr. Chadwick [urged the Commissioners] that a sum of 10,424*l.* 15*s.* 3*d.* should be deducted on the ground that in estimating the amount of assessable profits the Commissioners ought to allow as a deduction that sum which was claimed by the [Company] as "depreciation," and which, as stated in the annual report for the year ending 31st December 1874, "is based on a calculation of the extent of coal available and the duration of existing leases, but it may be modified as future circumstances require;" and he further explained that the term "depreciation" in the balance sheet was used to show to the shareholders the deterioration or difference in value of their property at the end of the year and after the working out of a year's coal and the expiration of a year of their leases, as compared with the value of such property at the beginning of the year; in other words, that a re-valuation of the property showed that it was worth, at the end of the first year, 10,424*l.* 15*s.* 3*d.* less than at the time of the purchase 12 months before [pp. 161-162].

In presenting the company's case to the Barons of Exchequer, counsel contended that 10,424*l.* 15*s.* 3*d.* "fairly represented the diminution in [the value of the coal mines], by reason of the coal gotten . . . , and which sum, for the purposes of such balance sheet, was technically, but perhaps incorrectly, referred to as depreciation" [p. 163]. Counsel argued that "capital withdrawn [which was disallowed under the act] is a different thing to capital used up" [p. 164]. He went on to describe how taxable profit must be recognized:

The first element to be determined is the full amount of the profits or gains. . . . You must, before you arrive at the profits at all, not merely be able out of your receipts to pay your expenses, but to replace your exhausted capital; before that is done profit does not begin. There is no difference in principle between the case of a colliery proprietor with a stock of coal under ground and a coal merchant with his stock above ground. . . . [T]herefore so much of the receipts as represents the diminution in the value of the mine by the exhaustion of the coal is not profit at all in any true sense of the word [pp. 164-165].

Pollock, B. intervened at that point to say "You cannot take the word profit alone" and counsel replied:

I should deny that it was gain from this particular adventure, trade, or concern; it is only your property converted into another form. Would not the Court of Chancery interfere if the company were going to pay a dividend when, though it had made a sum of money, it had exhausted an amount of coal more than representing that sum of money? Would not the Court of Chancery stop the payment of the dividend because there had been no profit? . . . In no proper sense of the word can you say that a man has made a profit when he has only that in another shape which he had before, namely, money instead of coal [p. 165].

The company's argument rested, therefore, on the fact that exhaustion of its capital in the form of coal stocks would be taken into account when calculating normal commercial profit, as evidenced by the analogy to a trading concern and by reference to profits that would be available for the payment of dividends.

The Attorney-General (Sir John Holker) presented the Revenue's case. He started with the familiar argument that the income tax was temporary "and a man has to pay on the amounts of profits which he may realise in any particular year" [p. 164]. He then presented "income" and "capital" as abstractions that must be kept away from each other in order to work: "[t]he idea of capital is kept separate from income, and it is upon the income that he has to pay" [ibid.]. He acknowledged that "[t]he argument of the other side [of diminution in value] may be right, upon the principles recognized in political economy; but the very aim and object of the Income Tax Acts seem to have been to prevent the principles which a political economist would apply from applying to cases under those Acts" [ibid.]. His colleague, Albert Venn Dicey, added that given that "the Act [was] only yearly, it would be extremely difficult [to treat Schedule D. businesses as a political economist would]" [p. 166]. The basis of the Revenue's case was, therefore, that taxable profits could not be the same as those profits calculated for other commercial purposes or as calculated by an economist. The Crown representatives argued that their interpretation was the same as what "the very aim and object of the Income Tax Acts *seem to have been*" [p. 164, *italics added*].

Dicey introduced an argument that suggests that the 1866 "transfer" of Schedule A No. III businesses to Schedule D was not as complete as the judges in *Addie* and *Forder* had treated it.

He argued that the issue was not a calculation of “profits” under Schedule D, but a calculation of “annual value” under Schedule A [see Figure 2]. He presented the Revenue’s view that the taxable income of concerns, such as mining, that had been transferred “for purposes of convenience of assessments” from Schedule A to Schedule D continued to be calculated according to the rules of Schedule A. Notwithstanding this point, he argued that the expense would be disallowed as a “withdrawal of capital” even under Schedule D rules.

Kelly, C.B. delivered the court’s judgment in favor of the company: “looking to the nature of the Income Tax Act, and looking to the plain and simple, but clear and undoubted meaning of the word “profits,” I do not think this case admits the smallest doubt” [p. 166]. He dismissed the Revenue’s claim that Schedule A rules continued to apply by reference to the “comprehensible expression” that such a mining case was “transferred” from Schedule A to Schedule D [ibid.]. His colleague Pollock, B. could see no “inconsistency between Schedule A and those rules [of Schedule D]” [p. 175].

Kelly, C.B. distinguished *Knowles* from *Forder* on the basis that the exhaustion of the coal stocks was deductible in arriving at net profits and that there was no express provision in Schedule D that disallowed such expenditure. In other words, he accepted the company’s contention that it was not *really* depreciation and that coal mining is a trade no different in essence from that of a coal merchant. The exhaustion of coal was not a “withdrawal of capital” because it was not a sum taken out of the business and applied for another purpose; it was not a “sum employed or intended to be employed as capital in such trade” because it was not something “additional to the capital which has been actually employed in realising the profit that has been acquired during the year;” and it was not “a diminution of capital” because it is a “purchase of an article which afterwards you sell at a profit” [p. 172].

Kelly, C.B. argued that the case of a mining lease for a single year was essentially the same as a lease for a multiple of years to the businessman. “His profit is that which remains to him and which he can put into his pocket and spend, if he has not already spent it, as part or the whole of his year’s expenditure” [p. 169]. If he were considering a mining lease for one year, the judge made clear that “profit” would equal the difference between revenue from the sale of coal in the market and the sum of amounts paid for the mining lease, labor, and machinery.

FIGURE 2**Rules for the Calculation of Schedule A No. III Profits**

Taxation of Annual Value	
<p>"The <i>annual value</i> of all the properties [of Schedule A, No. III] shall be understood to be <i>the full Amount</i> for One Year, or the Average Amount for One Year, <i>of the Profits received therefrom</i> within the respective Times herein limited." . . .</p> <p>1st "Of Quarries . . . , on the Amount of Profits in the <i>preceding Year</i>."</p> <p>2nd "Of Mines of Coal, . . . Iron, and other Mines, on an <i>Average of the Five preceding Years</i>, subject to the Provisions concerning Mines contained in this Act:"</p> <p>3rd "Of Iron Works, Gas Works, . . . Waterworks, . . . Docks, . . . Railways, and other Ways, . . . and other Concerns of the like Nature, from or arising out of any Lands, Tenements, Hereditaments, or Heritages, on the Profits of the <i>Year preceding</i>:"</p> <p>"<i>The duty . . . [shall] be charged</i> on the Person, . . . whether Corporate or not Corporate, carrying on the Concern, . . . <i>on the amount of the Produce or Value thereof, and before paying, rendering, or distributing the produce or the value</i> either between the different Persons or Members of the Corporation, Company, or Society engaged in the Concern, or to the owner of the Soil or Property, or to any Creditor or other Person whatever having a Claim on or out of the said Profits ; <i>and all such Persons . . . shall allow out of such Produce or Value a proportionate Deduction of the Duty so charged</i>, and the said Charge shall be made on the said Profits exclusively of any Lands used or occupied in or about the Concern".</p>	
Deduction of Tax at Source on Distributions of Profit in the Form of Annual Charges	
<p>"... [U]pon all Annuities, yearly Interest of Money, or other annual Payments, . . . there shall be charged for every Twenty Shillings of the annual Amount thereof the Sum of Sevenpence, without Deduction, according to and under and subject to the Provisions by which the Duty in the Third Case of Schedule (D.) may be charged; provided that in every Case where the same shall be payable out of Profits or Gains brought into charge by virtue of this Act, <i>no Assessment shall be made upon the [recipient of] such Annuity, Interest, or other annual Payment, but the whole of such Profits or Gains shall be charged with Duty on the Person liable to such annual Payment</i> without distinguishing such annual Payment, [who] shall be authorised to deduct [tax] out of such annual Payment . . . , and the Person to whom such Payment liable to Deduction is to be made shall allow such Deduction. . . ."</p>	
Charge and Assessment under Schedule D Rules	
<p>"The . . . concerns described in No. III. Schedule (A.) of [5 & 6 Vict., ch. 35, sect. 60] shall be charged and assessed to the Duties hereby granted in the manner in the said No. III. mentioned according to the Rules prescribed by Schedule (D.) of the said Act, <i>so far as such Rules are consistent with the said No. III, . . .</i>"</p>	

Source: 5 & 6 Vict., ch. 35. sect. 60 and sect. 102; 29 & 30 Vict., ch. 36, sect. 8; *italics added*.

Cleasby, B. concurred but was careful to state that he did not wish “to generalise so as to appear to include different cases.” He was persuaded by counsel for the company because “how can you get at the balance of the profits of trade without stock-taking?” He noted that the case turned on whether or not any provision of Schedule D Case I, 3rd Rule applied:

No doubt there are some of these rules which are inconsistent with economics. No doubt there is some reason why in dealing with the Income Tax it was thought that it should not go by the ordinary rules. . . . But I can find nothing in Rule 3 to call upon us in this case not to have [a] stock-taking . . . for the purpose of arriving at the balance of profits. . . . The proper description of it is “capital consumed in making the profits.” There is not the idea of capital withdrawn . . . in it [p. 174].

He went on to make clear that he did not see the circumstances of *Knowles* as at all similar to those of *Forder*. Exhaustion of coal stocks was not “depreciation”, which was money “put by.” “[Y]ou cannot put by a sum of money for the purpose of meeting depreciation. All you are allowed to do is to deduct your own repairs and things of that sort which belong to the year. . . . It seems . . . obvious that if you do more than that you depart from the principle of the Income Tax Act, which forbids it” [ibid.].

Pollock, B. pointed out the confusion attributable to language: “the case seems to me really to have arisen, from a sort of misapprehension which often unfortunately arises, not only in matters of law, but still more perhaps, in matters of commercial accounts, by the nomenclature which is used” [p. 175]. He referred to the fact that the company had used the phrase “depreciation” in its first accounts and concludes that the Commissioners failed to apprehend the true facts of the case as a result:

That seems to have landed the Commissioners in the idea that that was necessarily in diminution of the sum of the balance of profits or gains. When they get before the Commissioners, Mr. Chadwick, who thoroughly understands this matter, explains . . . that “. . . depreciation . . . is based on a calculation of the extent of coal available, and the duration of existing leases . . .” and he further explained that the term depreciation “in the balance sheet was used to show to the shareholders the deterioration or difference in the value of their property . . . after the working out of a year’s coal. . . .” That was explained by [their counsel] as meaning that . . . they had overworked the proportion of the whole quantity of

coal as compared with the whole number of years [ibid.].

Pollock, B. then likened depreciation in this context to rent, calculated partly by reference to annual rent payable and to an apportionment of the lease premium payable in respect of a number of years. He went on:

I do not think that there can be any doubt that when these facts are apprehended, and when we ask ourselves what is the profit or gain of this adventure, we must consider that term [depreciation] and estimate it, and therefore deduct it from the gross receipts of the sale of the coal before we can arrive at the balance of profits or gains. . . . [I]f [the case] had been done originally [as it was presented to the High Court], it would have never come to us at all [pp. 175-176].

Consequences of First Three Depreciation Cases: Agitation and Legislative Change: The first three judgments were based on literal interpretation of statutory words, but certain words remained difficult to interpret. Schedule D taxed "the balance of profits and gain." If the place to start was "profits," then how did express provisions of the act adjust this sum? Expenditure on "capital" was not permitted to be deducted, but what was "capital"? "Depreciation" was sometimes a deduction of capital; on other occasions "depreciation" arose from a revaluation of capital, but was not capital itself.

The first two judgments suggest that the courts saw "depreciation" as a provision for depreciation, rather than an accrual itself of the consumption of capital over time. Depreciation could be realized only at some future point in time when a loss in value occurred in a market transaction or repairs were incurred to restore use-values. How was disallowable depreciation for a part of the compound capital of a mine [*Addie*] different from allowable exhaustion of coal stocks in the third case, *Knowles*? The English High Court did not need to resolve that dilemma because *Addie* was Scottish precedent and the Barons of Exchequer had convinced themselves that "depreciation" was something entirely different from the exhaustion of coal through mining.

In the same year as *Knowles*, 1877, the absence of a statutory industrial depreciation allowance was the focus of agitation for change. Agitation took the form of direct lobbying of the Treasury, Inland Revenue, and Parliament. The introduction to this paper outlined the efforts by Chambers of Commerce and politicians such as David Chadwick aimed to introduce a

depreciation allowance in the 1877 and 1878 budget bills. This problem came up in other contexts, too. The Companies Act Select Committee, 1877 heard testimony concerning the statutory disincentive in the income tax act to the provision of depreciation [Bryer, 1993, p. 675]. Chadwick was a member of the Committee and co-author of the Companies Acts Amendment (No. 2) Bill to reform company accounts presentation. He proposed to omit any requirement to show depreciation in the balance sheet or profit and loss account "... because to enforce the putting of it in is to enforce the payment under the present state of the law of the amount for income tax on the depreciation" [SC, 1877, qs. 744, 1306-1308]. Because of the tax treatment, Chadwick preferred revaluation to depreciation as a way of arriving "at the value of the properties forming part of the assets of the company" [q. 1980].²⁰

Bryer [1993, p. 675] interprets Chadwick's comments to mean: "Prior to 1878 there was a strong tax disincentive against charging depreciation on wear and tear because it was only deductible for taxation if based on losses in "value"". The situation was not this clear-cut. Based on the High Court and Court of Session depreciation cases, it would have followed that no taxpayer who referred explicitly to "depreciation" would obtain tax relief. However, adjustments for losses in value (i.e. "depreciation" in the *Knowles* accounts) made in arriving at net profits had obtained relief. Bryer's analysis would have been more accurate if he had said, "there was a strong tax disincentive against *saying you were* charging depreciation". Along similar lines, Edwards [1976, pp. 306-307] suggests that one way taxpayers obtained relief for capital expenditure was "losing" items in the accounts. Bryer [1993, p. 676] concludes "that systematic depreciation was usually *charged*, ... even if ... it was not always *published*".

In 1878 Parliament agreed to introduce a "wear and tear" allowance to the law. There was some optimism that the 1878 law would deal with the inequitable absence of a depreciation allowance for income tax purposes. The new law stated:

²⁰Chadwick's testimony to the Select Committee may help explain some of the accounting policies of his other companies. Baldwin and Berry [1999] consider the capital accounting practices in three Chadwick coal and iron companies. In the accounts of all three they observe "a considerable reduction in the published information provided" in connection with depreciation from about 1870: "Depreciation was no longer mentioned in either balance sheet or directors' report, nor did the balance sheet identify separately additions and disposals of fixed assets, as had been past practice" [p. 86].

Notwithstanding any provision to the contrary contained in any Act relating to Income Tax, the [tax authorities] shall, in assessing the profits or gains of any trade, manufacture, adventure, or concern in the nature of trade . . . allow such deduction as they may think just and reasonable as representing the diminished value by reason of wear and tear during the year of any machinery or plant used for the purposes of the concern . . . [41 Vict. ch. 15. s. 12].

As subsequent cases make clear, taxpayers did not understand how narrowly the Revenue and the courts would interpret the phrases "any trade" and "any machinery or plant used for the purposes of the concern".

CASES AFTER THE STATUTORY DEPRECIATION ALLOWANCE, 1878

The Significance of Schedule A No. III: For the Revenue, A. V. Dicey argued in *Knowles* that the 1866 transfer of Schedule A No. III businesses to Schedule D only applied to matters of procedure and was intended to give those businesses the same degree of privacy as Schedule D Case I taxpayers enjoyed. In *Knowles*, the judges did not accept his argument; in *Coltness*, they did. Dicey [1835-1922] was an eminent legal scholar,²¹ and the line of his reasoning left its mark on income tax law and practice. In *Coltness* and later cases, judicial interpretation turned to older calculative principles associated with property taxes to deal with Schedule A No. III businesses. Through historical interpretation, the court abstracted the meanings of taxing words away from their contemporary commercial context. In doing so, the court made clear that neither "depreciation" nor "valuation adjustments" to reflect the consumption of capital had a place in the calculation of taxable profits of a mining company.

²¹ Dicey served as Inland Revenue counsel from 1876-90. At the time, he was already a prominent legal scholar and public commentator on matters of law and government [Ford, 1985]. From 1882 he was Vinerian Professor of English Law at Oxford. Dauntton [2001, p. 202] notes that he was "a leading opponent of 'collectivism' . . . [and] hostile to 'officialism,' arguing that lawyers should not become means to an administrative end of applying complicated statutes." Dauntton goes on to associate Dicey with the "strong professional ideology" of lawyers "as defenders of individual rights, linked with an ad hoc approach and resistance to general principles, which gave considerable significance to informal understandings between the revenue authorities, accountants and lawyers" [ibid.].

Coltness Iron Company v. Black [1879-1881]: This Scottish case was the first depreciation case to be heard by the courts after the law changed to permit appeal to the House of Lords and after the inclusion of the wear and tear allowance in the income tax law. Coltness, a large coal mining and iron-mastering business, appealed against an 1878 decision by General Commissioners that denied a £9,027 deduction for the cost of pit sinking. Before the Commissioners, the company claimed that “whatever might have been the interpretation of the law prior to [the 1878 change to permit the wear and tear allowance], they were entitled, under [that law] to the deduction they claimed” [p. 288]. The company cited the English case [*Knowles*] to support its claim that “sinking the pits was expenditure in winning the minerals” and argued that in the cost of “wages expended in sinking, there is nothing . . . to represent capital, and the money so expended cannot be an investment, because it can never be recovered” [ibid.]. The Surveyor of Taxes contended that the wear and tear allowance only applied to plant and machinery and earlier case law [*Addie*] had established that the expense of pit sinking was a disallowable “charge upon capital”.

After the Court of Session affirmed the decision of the Commissioners, the Company appealed again. In presenting its case for consideration by the House of Lords, new evidence was introduced, including detailed schedules of pit sinking costs, pits exhausted over a long period, and a derivation of the £9,027 claimed. The revised information clarified that the amount claimed:

. . . does not represent the cost of pit-sinking during the year, but is a sum . . . estimated [to] properly represent the amount of capital expended on making bores and sinking pits which has been exhausted by the year’s working. . . . The working charges deducted and allowed in ascertaining the profits for assessment include the whole cost of getting and raising the minerals, after the pits are sunk, and of manufacturing the metal and selling the iron and coal, and the general expenses of the concern [pp. 295-296].

The revised case emphasized the company’s claim that the deduction was for capital exhausted during the year in question. The case was reconsidered by the Court of Session, but it affirmed its earlier decision. In the course of his judgment, the Lord President made clear that there was a difference between the calculation of profits for tax purposes and “the amount of the net profits of the year which would appear in the ordinary

annual balance sheet of a trading company" [p. 307]. When ascertaining net profits for the purpose of paying dividends, "the state of the capital account necessarily affects the balance sheet" [p. 308]. However:

... the [tax] statute refuses to take an ordinary balance sheet, or the net profits thereby ascertained, as the measure of the assessment, and requires *the full balance of profits*, without allowing any deduction except for working expenses, and without regard to the state of the capital account or to the amount of capital employed in the concern, or sunk and exhausted, or withdrawn. Any other construction of the statute would ... be inconsistent with the leading principle on which it is based and with its express words. ... [T]he statute is not concerned with the failure or success of his speculation, and looks only to what is the income derived from the business year by year [ibid.; *italics added*].

The statutory phrase "the full Amount" [see Figure 2] was interpreted to modify "profits". "The full balance of profits" emphasized that "profits" in taxation had a nature different from other forms of "profits".

The House of Lords heard the case in 1881 and affirmed the decision of the lower court that no tax allowance was available for the exhaustion of capital. In doing so, the Lords reviewed the English High Court decision in *Knowles* and overruled it. The Lords also sought to interpret the relevant legislation of Schedule A and Schedule D in its historical context and, in so doing, presented a persuasive explanation for the divergence of taxable profit measurement from commercial accounting profits. This analysis was significant for the development of judicial doctrines of "capital" versus "income" in taxation.

The Lords confirmed the lower court's view that net profits for tax purposes were not net profits as disclosed in a set of accounts presented to shareholders. This was a contradiction of the decision in *Knowles*, in which the High Court interpreted the phrase "balance of profits or gain" to mean normal commercial profits adjusted only if any of the matters "expressly enumerated" applied in the particular case. Earl Cairns said:

It may be proper for a ... trading concern to perform in ... their books an operation [to deduct mine depreciation] every year in order to judge of the sum that can in that year be safely taken out of the trade ... but I am clearly of the opinion that the owner of a mine cannot ... thus manipulate his accounts when the question is

... what is the amount of [taxable] profits received from the mine [p. 312].

Lord Blackburn further distinguished taxable profits from the profits that would be calculated by a political economist. He quoted a passage from "McCulloch on Political Economy":²²

Profit must not be confounded with the produce of industry primarily received by the capitalist. They really consist of the produce on its value remaining to those who employ their capital in an Industrial undertaking after all their necessary payments have been deducted, and after the capital wasted and used in the undertaking has been replaced. If the produce derived from an undertaking after defraying the necessary outlay ... is merely sufficient to replace *the capital exhausted*, there is no surplus, there is no loss, but there is no annual profit [quoted at pp. 315-316, *italics added*].

Lord Blackburn went on to say: "I do not feel at all inclined to dispute the sufficiency of this definition ... [b]ut that is certainly not the scheme of the income tax" [p. 316].

Lords Penzance and Blackburn took the argument further and made clear, unlike the Barons of Exchequer in the *Knowles* case, that they found legal significance in the fact that mining concerns were strictly subject to tax under Schedule A, No. III rather than Schedule D.²³ The analogy in *Knowles* to trade in cotton or tea had not "elucidated but rather confused" the analysis of the case [p. 314]. Therefore, the Lords supported an argument that had been made by the Surveyors in these cases that the transfer to Schedule D only applied to the *process* of assessment.

After noting that in "a strict and logical sense" the "actual profit obtained by the Company out of the entire adventure" would be calculated by reference to the "prime cost of the mineral bed", Lord Penzance stated that he did not think that this was the sense in which the word "profit" was used in the income tax act: "[t]he intention of the Act, it is abundantly clear, was in Schedule A to tax property" [p. 313]. As far as a mine was

²² See Daunton [2001, Ch. 6] for a discussion of the leading role played by economists, including McCulloch, in debates over tax policy and practice, and for introducing relevant language and concepts to political debate and public discourse. Counsel for the ordinary shareholder attempted, with no apparent positive effect, to use this passage from McCulloch to support his contentions about the proper meaning of "profits" in *Lee v Neuchatel* [1888/89] at p. 12.

²³ Earl Cairns, on the other hand, was of the view that "the thing to be assessed" was the same whether under Schedule D or Schedule A [p. 313].

concerned, "[t]he only question is how shall the annual value of this species of property be ascertained" [ibid.]:

The words "profit received therefrom" are here introduced to define the annual value of the thing which is to be taxed, which is the "mine," and it could not I think be intended that for the purpose of calculating "the annual value" of a "mine," the original cost of the "mine" itself, or any part of it should be first deducted. . . . [T]he words "profits received therefrom" . . . mean . . . the entire profits derived from the "mine," deducting the cost of working it, but not deducting the cost of making it [p. 314].

"Property" was the "thing" to be identified, because it gives rise to the taxable income, the "annual value". This case reminds us that the original income tax was charged by virtue of the *Property* and Income Tax Act [39 *Geo. 3. ch. 13*], and subsequent acts retained references to "property" along with "income" as objects of the tax.

Lord Penzance distinguished the case of a Schedule D trader from that of a Schedule A mine-owner:

For the . . . trader is taxed . . . not in respect of any "property" which he possesses and of which he enjoys the fruits, but only upon the profits which he realises annually in his trade, whereas the owner of a "mine" is taxed in respect of that "mine" as a fixed and realized "property," which belongs to him and from which he reaps an annual benefit; and the words "annual value" or "profit received" from that "property" are introduced into the Statute, not as the subject of taxation, but only as the measure of the taxation to which the "property" shall be subjected [p. 314].

Lord Blackburn continued by saying that "the only safe rule" was to interpret the "words of the enactments" in what he believed to be its historical context. The origin of the particular tax definition of profits was related to the object of taxation, i.e. "to grant a revenue at all events, even though a possible nearer approximation to equality may be sacrificed in order more easily and certainly to raise that revenue" [p. 317]. He pointed out that the words of the legislation in question resembled the poor laws:²⁴

²⁴ Under 43 *Eliz. ch. 2* parochial officials were permitted to tax inhabitants of the parish on tithes, coalmines, and woodlands. This power to "rate" ended by virtue of 3 & 4 *Vict. ch. 96* and subsequent legislation.

... [L]ong before any income or property tax was imposed for general revenue, the parochial authorities in England raised a revenue ... which was very much in the nature of an income and property tax; and the language used in the Income Tax Acts is such as to convince me that the legislature had in their contemplation what had been done in this branch of the law [p. 317].

He cited case law that disallowed deductions for “planting” coalmines when calculating “the net annual value” of the produce of the mine for parochial poor law purposes. He does not present the case as an authority for income tax, but as an indication of a matter that “must have been well known to that large proportion of the legislators who habitually acted at quarter sessions” [p. 318].

Lord Blackburn then turned to the history of the income tax to support his argument. In defining Schedule A in the 1803²⁵ act, the legislature had:

... classed together in one schedule properties, such as agricultural land, which from their nature will continue permanently to exist, and properties, such as quarries, which will certainly come to an end within a period ... which can be generally calculated, and properties, such as iron works, which are real property, deriving their annual value from being ancillary to a trade [pp. 318-319].

On all such property, the legislation imposed the rule that the “annual value” should be taxed and charged on an amount not less than the property rating at the last poor rate. A deduction for repairs was not generally available. To Lord Blackburn, this cross-reference to the poor rate proved that the parochial tax was in the legislators’ minds at the time. (The reference was dropped in the 1806 and later acts.) On the basis of the historical link”, Lord Blackburn concluded that the requirement of Schedule A, No. III to tax the annual value of mining properties to be “understood to be the full amount for one year ... of the profits received therefrom” must mean “that which is produced from them” [pp. 320-321].

Lord Blackburn then went on to link the idea of “annual value” as calculated without any deduction in respect of “capital” to the taxation of “annual profits” under Schedule D:

²⁵ 43 *Geo. 3. ch. 122, s. 31.*

In the [1842 act] the different schedules were kept apart and complete in themselves, but I think wherever there was any provision in any one of the schedules that throws light on what is meant by annual value or annual profits or capital, it may be very material in construing the meaning of those words used in other parts of the Act [p. 322].

Although subsequent cases supported Lord Blackburn's view that the *Coltness* case had significance for Schedule D,²⁶ he focused on those concerns specified in Schedule A No. III which were "transferred" to Schedule D in 1866. He believed the purpose of the transfer was to give the Schedule A concerns the benefit of "all the anxiously devised provisions for keeping the returns under Schedule D. secret and confidential". He argued why he believed the principles of Schedule A calculation still applied to these concerns. As pit-sinking expenses would be regarded as capital expenditure under general Schedule A principles, there was no need to interpret the Schedule D Case I, 3rd Rule concerning particular types of capital expenditure. He made clear, then, that he regarded the *Addie* case as correctly decided, but for the wrong reason. The *Knowles* case as wrongly decided, he said, because it rested on a misinterpretation of the transfer of mines from Schedule A to Schedule D and a misunderstanding of the interpretation of a mine's profit for the year in the context of the tax law.²⁷

The House of Lords decision in *Coltness* moved the tax treatment of mining and other Schedule A No. III businesses away from the treatment of trades and further still from the practices of commercial accounting. This development was counter to proposals advocated by politicians and popular protesters in the 1870s. Nonetheless, subsequent judicial decisions confirmed the *Coltness* interpretation. In *Mersey Docks and Harbour Board v. Lucas* [1883], the House of Lords confirmed that the 1866 "transfer" of Schedule A No. III businesses to

²⁶ *The Alianza Company, Ltd. v. Bell* [1904]; Court of Appeal, Master of the Rolls (MR). See also Findlay, J. in the High Court and in the Court of Appeal, MR in *Golden Horse Shoe (New) Ltd. v. Thurgood* [1933]. Also, in the Court of Appeal, MR in *Stow Bardolph Gravel Co., Ltd. v. Poole* [1954], see the confirmation that there was no distinction between Schedule D and Schedule A No. III in distinguishing "capital" from revenue expenses.

²⁷ Lord Blackburn referred to the *Forde* case, but — strangely — as a repairs case and did not review it further since he assumed it to be covered by the 1878 legislation concerning wear and tear.

Schedule D only applied to the process of income taxation, not the principles or substantive calculation of taxable profits. In the same case, the Lords made clear that the “profits” of Schedule A No. III businesses should be defined in terms of the property, not the trade or enterprise.²⁸ This case also cited the idea that “profit” could be used “in the legal sense of the word, as meaning the profits of land” [p. 440], or, in the words of the Master of the Rolls, “the net produce of the land” which was “the meaning to be attributed to the word in the . . . 3rd [rule] in Schedule A” [pp. 461-462].

The Limitations of the 1878 Statutory Depreciation Allowance: Use of abstraction and historical interpretation to assign meanings to taxing words permitted the courts in *Coltness* to drive a wedge of time between the meanings of “profits” for tax purposes and commercial “profits.” Once these concepts were separated in time, it became easier for the courts to recognize the essential difference between “profits” measured for the different purposes. In the transport depreciation cases discussed below, the courts revealed their unwillingness to make calculations themselves. In addition, the *Caledonian Railway*, *Burnley Steamship*, and *Leith Steam Packet* cases can be interpreted as revealing the courts’ unwillingness to adopt a liberal interpretation of the 1878 allowance. Because of *Coltness* and the transport depreciation cases, the authority of the Revenue to distinguish taxable profits from commercial profits increased, as did their authority to make calculations.

Caledonian Railway Co. v. Banks [1880]: In 1880, prior to the House of Lords decision in *Coltness*, the Scottish Court of Session heard a case that involved interpretation of the 1878 legislation as it applied to plant and machinery. In a hearing before the Special Commissioners, representatives for the Company,

²⁸ See, in particular, Lord Fitzgerald, who said “profit” in the context of Schedule A No. III referred to “income acquired from the estate, of whatever character it may be, over and above the costs and expenses of receipt and collection.” The Lords accepted the judgement of Lord Blackburn, M.R., in the Court of Appeal, and, effectively, Dicey’s argument for the Crown in *Coltness*. Lord Blackburn said that he had based his argument “upon the similarity . . . between the rules as to income tax and rules as to poor rate” and he went on to say that “in estimating whether there are profits you are to look not at whether a particular person derives profits, but whether the concern is a thing that brings in an excess of receipts.”

including an accountant, had argued that the company was entitled to allowances of £253,389 for repairs and renewals to locomotive power, carriages and wagons:

"Renewals" means the substitution of new locomotives . . . for those worn out; . . . 24 new locomotives . . . were better quality, and more expensive, than those of which they were renewals. . . . [A] sum of 20,837*l*. [was] set aside out of profits for renewals and repair [but] not yet applied for that purpose. . . . By this expenditure . . . , according to the certificates of the Company's locomotive superintendent, the Company's property and plant have been maintained in good working condition and repair [p. 488].

In addition, the company claimed £185,391 for depreciation of rolling stock, machinery, etc. Before the court, company counsel argued that it was "impossible to keep the value of the plant up to cost price;" annual repairs and renewals "only keeps it up to 75 per cent. Of cost price, therefore 25 per cent. has been consumed" [p. 492].

The court supported the decision of the Special Commissioners. The 1878 legislation, they said, permitted the Commissioners to find as a matter of fact that there had been a diminution in the value of plant and machinery due to wear and tear. In this case, it was decided that the Commissioners had been entitled to decide that there was *no* wear and tear to be compensated for by way of an estimated wear and tear allowance (the depreciation). As Lord Gifford said, it was "fair and reasonable" for the Commissioners to have permitted the company an allowance for the actual cost of repairs and renewals as an alternative to an estimate of the wear and tear suffered during the year. However, he thought it "quite clear . . . that the Railway company cannot get deduction for deterioration twice over — first, by deducting the actual expenses of repair and renewal, and then by deducting an additional estimated sum for the same thing" [pp. 499-500]. The court did not accept that wear and tear allowance should be given by reference to cost-based accrual accounting; "diminution in value" of plant and machinery was to be estimated by reference to value to the business, and if that value was said by the company to be maintained then there was no case for a wear and tear deduction beyond the value of the repair and renewals required to maintain the value of productive capital. This view was consistent with the argument of the Board of Inland Revenue in 1877 when the circular to General Commissioners was issued [CIR, 1878b, p. 64]. However, the

court argued that the purpose of the 1878 change in legislation was to permit a business to claim wear and tear allowances for a diminution in value to the business that was not restored by expenditure on repairs and renewals.

In the *Caledonian Railway* case, the court made its decision with no apparent reference to the other depreciation cases; its judgment rested on its interpretation of the words of the relevant legislation and it created its own interpretations for key passages. For example, the "assessable value of the income for the year" was equated with "clear profit realised" after "all the outgoings which are necessary to attain the sum of gross profit [are] deducted" [the L. J. Clerk, p. 493]. For a business, such as the railway company, "value" of plant meant "capacity to earn income," not "value of the plant as merchantable or marketable articles"; the first was "the only quality contemplated" under income tax law [p. 496]. The Second Division saw no reason why taxable profits should not equal accounting profits:

[T]he assessment has been made in entire accordance with the Railway Company's own accounts. . . . I see no reason why the income tax . . . should not be fixed upon the same principle as that which determines the dividend to the proprietors. . . . Surely no complaint can be made if the Railway Company pay income tax only upon what they themselves divide as dividend or net profit [Lord Gifford, p. 500].

Although these views represented no lasting precedent after the House of Lords decision in *Coltress*, they re-emphasize the scope of interpretation of taxing words during the first fifty or so years of income tax. It was not immediately evident to all parts of the judiciary that there were large differences between taxable and commercial profits. The Second Division of the Scottish Court of Session had apparently not paid close attention to the income tax decisions of their First Division brethren, such as *Addie* and how it was referred to in the higher courts.

Burnley Steamship Company v. Aikin [1894]: Another depreciation case was heard by the First Division of the Court of Session in 1894. The company had claimed a deduction in respect of depreciation of a ship because of loss of earning power and market value due to the obsolescence of the ship. All the company had been allowed was a wear and tear allowance calculated as 5 per cent of cost on the reducing-balance basis. In order to reflect the other causes of diminution in value, the company argued that the rate should be 7.5 per cent.

The court rejected the arguments of the company. Lord McLaren summarized the reasoning:

It seems to me that [if] the depreciation which is claimed [for loss of earning power] means . . . that the vessel through competition with other vessels is less able to earn freight during the remainder of its existence, then I think on the principle of the case of the *Coltness Iron Company* . . . no deduction can be made . . . because [income tax] assessment is not made upon capital but upon income, and the principle of the Act is that you pay Income Tax upon a subject which may be continually diminishing in value, and when it is exhausted you have no longer any tax to pay because the income ceases [p. 277].

Lord McLaren concluded that "wear and tear means nothing more than the physical depreciation of the subject apart from its being rendered less useful by the discovery of better machinery or better models of doing the same thing" [ibid.].

Leith, Hull, and Hamburg Steam Packet Company v. Bain [1897]: This final depreciation case also concerned allowance for wear and tear. The company had calculated depreciation at 7.5 per cent, whereas the General Commissioners considered that 5.5 per cent was adequate:

[T]he Commissioners by a majority found as a fact that the normal life of a steam vessel may be reasonably taken as at least 22 years, and that [it] followed as a matter of arithmetical calculation that an annual allowance of 5 per cent. on the reducing value, with compound interest at the rate of 3 per cent., will recoup the original capital expenditure; or in other words, meet the depreciation of wear and tear [p. 562].

The company contended that the allowance calculated by the Commissioners did not conform to the 1878 legislation. Based on its own evidence and that of "eleven other principal shipowners of Leith," the company mustered a number of alternative calculations that were more favorable in its view, and, of course, larger.

The Surveyor countered by saying that an allowance spread over a "considerable number of years" and was consistent with the judgment in *Caledonian Railway* [1880] which "permitted the trader to keep up his plant and replace it when it is worn out". Further, he argued that sinking fund calculations of the

sort were “in ordinary use” for depreciation as “shewn by reference to the published evidence of Mr. Lass, F.I.C.A., London, in the Falkirk Gas Arbitration case” [pp. 563-564].

Despite (or perhaps because of) the large amount of evidence placed before it, the court decided that it would confirm the Commissioners’ decision because it seemed that the allowance given had been judged to be “fair and reasonable” as a matter of fact. However, the court made it very clear that it found the case to be “abominably badly stated” and that they could find no “question . . . raised which we can entertain” [p. 567]. Calculation, therefore, was a factual matter for others to decide, not the courts.

DISCUSSION

The depreciation tax cases reveal conflicting views of the principles, practices, and meanings for taxing words that should govern calculation. The ways in which conflict was resolved and the institutional politics underlying the process had lasting consequences for the development of modern depreciation accounting, clarification of distinctions between tax and commercial accounting concepts of profits, and the emergence of modern regulatory control of taxpayers. Each of these themes is developed below.

Accounting for Depreciation: Bryer [1998] argues that a capital-revenue theory of profit measurement and capital maintenance was widely accepted by accountants and judges. His view is supported by the systematic distinction between capital and revenue made by taxpayers in the depreciation cases. (The depreciation claims made in the tax depreciation cases are summarized in Table 1). We find evidence that some companies adopted more than one method of accounting for capital at a time. Some cases mixed repairs and renewals, replacement, or depreciation accounting. Confusion between depreciation as an allocation of cost or as a provision for replacement is evident in these cases, just as it is evident in commercial accounting [Napier, 1990].

The cases emphasize different aspects of accounting for capital. In *Addie*, depreciation was conceptualized as an allocation of cost, adjusted for residual value, over the useful life of assets. A range of detailed methods for estimating the portion of cost consumed were presented, expressed as “deterioration” in or “exhaustion of” the “value” of capital in some cases [Knowles,

Coltness]. Depreciation was integral to maintenance of financial [*Caledonian Railway*] and operating capital [*Burnley Steamship*] through the provision of the cost of eventual replacement of capital assets. In *Knowles*, the businessmen recognized that "exhausted capital" required provision for replacement, and the company's counsel argued that capital should be recognized as it circulated from one form (coal deposits) into cash and then back into the original form (coal deposits) again [see *Knowles*, 1877, pp. 164-165]. Depreciation was not a simple matter of allocating historic cost to the time periods in which the asset was used, but it had to include an element to recognize the problems of obsolescence and technical improvements in capital assets [*Burnley Steamship*]. Businesses recognized the inability of repairs to maintain "cost price" [*Caledonian Railway*].

Companies could be quite flexible in how they explained the need for depreciation. In *Coltness* [1879, 1881] the company tried three separate explanations before the courts. The *Leith Steam Packet* case reveals that local officials were prepared to go into great commercial and arithmetical detail to find "fair and reasonable" deductions, rather than arbitrary measures for depreciation. It is also clear from that case, that the company's preferred method of depreciation considered the commercial circumstances of each of its steamships individually.

The problems of profit measurement, capital accounting and depreciation were matters that judges in the Court of Appeal or the House of Lords would have encountered from corporate cases referred from other divisions of the High Court of Justice, such as the dividend cases from Chancery. These issues were, however, relatively unfamiliar to the lower courts. The Exchequer courts in England and Scotland did not deal with dividend and insolvency cases. As a preamble to his decision in the *Caledonian Railway* case [1880], the Lord Justice Clerk noted that questions of measuring railway profits and depreciation were questions "with which we are not generally familiar, and that fact has rendered the discussion and the consideration of it somewhat difficult" [p. 493]. Judges expressed appreciation when cases were "divested of arithmetical details, which do not affect the matter" and reduced to "simple propositions" [*Caledonian Railway*]. Reflecting the court's confusion concerning the *Leith Steam Packet* case [1897], the Lord President said: "It is one of the characteristic peculiarities of this Case that no one can tell with confidence what is the question raised, or indeed what the Commissioners decided, beyond the arithmetical results" [p. 567]. After three days of hearings that covered

the minutiae of depreciation calculations, the Lord President found the case to consist of “a farrago of facts, evidence, opinion, argument, authority, and illustration” and to be “so egregious a failure” that he could do nothing else than dismiss the taxpayer’s appeal [p. 568].

The ease with which judges were able to conceptualize depreciation varied considerably. In *Forder*, Pollock, B. indicated that he thought the purpose of the recognition of depreciation in commercial accounts was indeterminate. In his view, depreciation was something that occurred or was realized at a point in time. He could understand how coal capital was consumed in a mine, but calling the consumption “depreciation” created a problem of “nomenclature” [Knowles]. Huddleston, J. equated depreciation with a provision for expenses of renewal [Forder]. Although judges sometimes expressed themselves as understanding why a commercial man needed to recognize the consumption of capital, they associated this practice with an economic concept of depreciation [Coltness, Blackburn, L.].²⁹

Some judges displayed difficulty in understanding the principles and practices of depreciation, while others evidently saw the commercial and economic point. Meanwhile, the depreciation concept that emerged for tax purposes was very narrowly defined and tied to words of law written at the start of the 19th century. The express words of Schedule D law permitted deductions for “repairs,” but disallowed capital costs defined in various ways. The way in which the 1878 wear and tear allowance was interpreted made it an extension of the “repairs” allowance that already existed. Thus, Lord McLaren defined acceptable tax “depreciation” (i.e. the allowance for wear and tear) in terms of the maintenance of physical capital [Burnley Steamship] rather than by reference to the maintenance of financial capital, operating capital, or realizable capital, which are all capital maintenance concepts touched upon in the cases.

Business had changed between the time income tax was introduced and the 1880s when *Coltness* was decided. Trade and industry had grown in importance to the economy, while agriculture had experienced relative decline. Businesses were increasingly complex and geographically expansive. Mining and other Schedule A businesses operated and were organized in a manner much more akin to general trading concerns. From the

²⁹ The variability of judges’ ease in conceptualising depreciation and related accounting concepts was also evident in the depreciation cases [e.g. Reid, 1987; Bryer, 1998].

detail presented in the cases, it seems clear that businesses were adapting to their changing commercial environment by developing detailed, thoughtful, and systematic methods of providing depreciation in the last quarter of the 19th century. When it came to details, Surveyors were just as capable as businessmen of using sophisticated methods of calculation. The Edinburgh Surveyor supported the case for standardization of sinking-fund method depreciation, based on broad industry averages, for purposes of granting tax relief to the taxpayers in the particular industry. Standardized percentages for wear and tear allowances, calculated on a reducing balance basis appear, therefore, to have been favored by the Revenue [viz. *Leith Steam Packet*]. While the tax depreciation cases reveal that commercial depreciation was provided to cover diminution in value from four causes — wear and tear, exhaustion, loss of earning power, and obsolescence — tax authorities and the courts were prepared to give depreciation allowances only for the wear and tear portion.

Several accounting studies emphasize the influence of the tax treatment of depreciation on the development of accounting theory and practices [Edwards, 1976; Watts and Zimmerman, 1979]. The tax depreciation cases provide some evidence of tax influence on depreciation reporting [viz. SC, 1877 (Chadwick) cf. Baldwin and Berry, 1999]. However, what is most evident is that commercial depreciation accounting developed despite the emergence of a tax system of depreciation which was quite limited and predicated on quite distinct principles. Bryer's [1993, p. 657] argument that depreciation accounting developed for reasons other than the 1878 wear and tear allowance seems convincing. Cases after 1878 indicate that businesses continued to charge depreciation despite their shrinking hopes of obtaining tax allowances. This evidence is consistent with Bryer's contention [1993] and Baldwin and Berry's [1999] evidence that depreciation was usually charged, even if it was not reported.

Cases like *Caledonian Railway* highlighted the problem of treating depreciation as an allowance for "wear and tear." If operating capital could be maintained by repair, then, the tax authorities asked, why is depreciation necessary? "For the eventual replacement of capital" was not an acceptable answer. Undoubtedly, the emerging distinctions between the two will have sharpened the nature of the depreciation debates as Watts and Zimmerman [1979] suggest.

Concepts of profit: Many General Commissioners continued to regard "nett profit" or "clear profit" as calculated for purposes of

commercial accounting as the basis for taxing businesses on their profits. The courts and the Surveyors gradually enforced their interpretation of “profits” in tax law as something quite distinct. Residues of late-18th century conceptualizations of business guided income tax rules, given the way the Revenue and the courts chose to interpret the taxing words. In practice, these residues limited the scope of subsequent tax statute and case law changes.

The amount taxable was an “annual amount.” Tax legislation made clear that the Schedule D taxable amount was “profits” for a particular year or average of years, adjusted for the specific injunctions contained in the legislation, such as the disallowance of “any capital withdrawn”, “any sum employed or intended to be employed as capital”, or “any capital employed in improvement of premises” [see Figure 1]. The early depreciation cases [*Addie*, *Forder*] made clear the necessity of recognizing “profits” and then making adjustments in accordance with tax law. Later cases [beginning with *Coltness*] made clear that the concept of “profits” underlying the taxing acts was essentially different from the concept applied in commercial accounting practice or in the dividend cases under company law. In *Mersey Docks* a distinct legal concept of “profits of land” was recognized. This principle at first applied only to Schedule A No. III businesses. However, subsequent case law extended the principle of essential difference to Schedule D Case I businesses [e.g. *Alianza*, 1904].

In the tax depreciation cases the essential difference between the concepts of profit was established first through literal interpretation of the law and then by construing words in what was deduced to be their historical context and the intention of Parliament. Well-established practices of legal interpretation, reinforced by the provision in the income tax act that “it shall not be lawful to make any other deductions . . . then such as are expressly enumerated in this act” [fn. 19 *supra*], focused Revenue attention on the words of the act. They used these words as weapons to make taxpayers and General Commissioners conform to their understanding of how the income tax should operate. Once income tax appeals could be taken to the courts, judges dissected and combined words and meanings. Pollock, B. in *Knowles*, understood the “balance of profits and gains” as the commercial profits available for appropriation. In *Coltness*, judges added the word “full” to get “full balance of profits” which placed the relevant concept of profits for income tax firmly in the historical context of property taxes.

Elements of the principle of strict interpretation were evident in these judgments: in a taxing act one has to look at the "express words" [*Coltness*, High Court, Lord President] and there is no equity in a taxing statute [*Forder*]. Tiley and Collison [1999, pp. 15-16] write:

The literal interpretation . . . had . . . two consequences. The first is that it is for the Crown to establish that the subject falls within the charge. This means that if the words are ambiguous the subject is entitled to the benefit of the doubt. *But the principle is not that the subject is to have the benefit* if, on any argument that ingenuity can suggest, the Act does not appear perfectly accurate but *only if, after careful examination of all the clauses, a judicial mind still entertains reasonable doubts as to what the legislature intended*: . . . if there is no ambiguity then words must take their natural meaning (*italics added*).

Historical interpretation was part of the "ingenuity" by which judicial minds could overcome ambiguity. Lord Blackburn employed these practices in *Coltness*. In that case, he also signaled the extension of the judgment to apply to Schedule D Case I. This involved another principle of interpretation: that words used in the same context in different statutes may be construed in the same way [Tiley and Collison, 1999, p. 18].

Judicial practices of interpretation were adopted as Inland Revenue practices. Revenue representatives argued that allowances for capital were disallowed because the income tax was a "temporary tax". The court decisions examined in this paper did not directly support the Revenue's historical interpretation. Instead, judges were concerned to determine which concept of "profits" legislators must have had in mind when they drafted the relevant words of legislation. The historical interpretation in *Coltness* rested on the House of Lords' understanding that the profits taxed by the income tax were the annual return on property or reward for effort. The annual return on property was conceptualized as it had been for much older British property taxes (e.g. parochial rates). It was probably significant that the concepts and practices of accounting for capital as it was consumed were not well developed or consistently applied in the late 18th century when the original principles of the income tax were developed. Instead, the concepts found by the courts were more consistent with aristocratic accounting operated in the context of agricultural estates [cf. Napier, 1997].

Interpretation of income tax law in its historical context, as

was done in *Coltness*, firmly tied late 19th century income tax concepts to the concepts that courts believed had applied to the words at the end of the 18th century. This allowed them to disassociate the broad categories of costs for the year that could be deducted to arrive at profit from the then current commercial practices or the actual practices of the particular taxpayers. A distinction between “income” and “capital” was regarded by the courts as fundamental to the taxing acts, and a distinction that must be created by judicial means, rather than natural understanding, when dealing with property which derived value from being affiliated with a trade. The “fruit” of agricultural land could be seen to follow the “planting” of seed. The “fruit,” or coal, of a mine was visible when brought to the surface, even if the process of “planting” the “tree”, the underground mine, was obscure. Property as the “tree” generating an annual “fruit” was an old idea, but still in circulation owing to the popularity of Adam Smith’s *The Wealth of Nations*.³⁰

Regulatory control of income taxation: The distinctive tax meaning of “profits” led to larger tax assessments than a commercial meaning would have. Revenue officers had strong motivations for enforcing the distinction. Inland Revenue officers seemed to taxpayers to be intent on “getting as much as they can” in tax revenue [SC, 1861, q. 4102, Gooch]. Revenue officers expressed impatience with local Commissioners who collected less tax than they should or could [e.g. SC, 1861, Welsh] and “performed no function which they could avoid” [Riddle, 1887, pp. 118-119]. They complained about their lack of “control” over the Commissioners and their subordinates [SC, 1861, q. 2161, Welsh]. Surveyors, the Revenue officers working in local tax offices, fell under the supervision of traveling supervisors and accountants [Lamb, 2001, p. 282]. The “crushing nature” of pressure to be effective from Somerset House in London was a feature of a rigid regime of accountability on local officers under which “the

³⁰ Adam Smith’s description [1776, Bk. 1, Ch. 6] of capital as the “tree” and income as its “fruit” became a metaphor used by politicians, judges, and others to describe the tax distinction [Boden, 1999; Dauntton, 2001, p. 206]. Smith uses agricultural metaphors to describe mining [1776, Bk. 1, Ch. 11, part II]. In *Coltness* Lord Blackburn cites the words “planting the mine” from eighteen century statute, but he is wary of applying the agricultural land metaphor to land that does not “grow” crops in a literal way. Later cases were less scrupulous in applying the metaphor and it came to be used in a very general sense. In *Pool v Guardian Investment Trust Co. Limited* [1921], Sankey, J. refers to the concept, as developed in the US Supreme Court case *Eisner v Macomber* [1919].

Board of Inland Revenue made the Surveyors feel the weight of their displeasure when anything went wrong" [Riddell, 1887, pp. 118-119, 131]. Accounting for assessments and the provision of statistical data to head office was a responsibility of Surveyors and involved "wandering through an interminable maze of figures, heaping results on results without any system" [op. cit., pp. 141-143]. In the 1870s practical technical training was gained on the job, and consisted of review of notebooks compiled by officers who were more senior and experienced, and also careful study of the words of statute [op. cit., pp. 86, 87, 109]. All of these factors suggest the accuracy of Gooch's assertion that Revenue officers did their jobs well if they were "getting as much as they can".

Inland Revenue authority in tax administration was enhanced once the courts expressed their approval for the quasi-judicial practices of interpretation adopted as Revenue practices. The courts' approval, however, required judges themselves to confront the ambiguity of meanings for taxing words. In dealing with the ambiguity of tax law by constructing their own distinction between commercial accounting and tax calculations, the courts were in one sense doing nothing more than following their own practices of legal construction. It is argued in this paper that the construction of certainty in judicial minds through practices of interpretation of the historical context in which the words of statute were written suited the courts, and the House of Lords in particular, in the 1870s and 1880s for other reasons. Ambiguous words of statute, as "profits" was, might, alternatively, have been construed according to its ordinary meaning, such as the commercial meaning of profits.

The courts were required to recognize that a taxing act had "to grant a revenue at all events" [Coltness, Blackburn, L.]. This placed a regulatory obligation upon them. A large body of judicial precedent existed in dividend cases [Reid, 1987; Bryer, 1998] by 1878 when the Court of Appeal and the Lords became directly involved in the income tax appeal structure. Therefore, these courts were familiar with ordinary meanings for profits in a commercial context and had developed their own body of precedent for the meaning of the word. Keeping those meanings away from the meaning that would attach to the word for tax purposes was important for reinforcing the literal meaning of the tax law as well as to ensure that the courts could fulfill their regulatory obligations without creating conflicting, but unjustified, meanings for words like "profits" that appeared in both contexts.

The Court of Appeal used historical interpretation to define “capital”, and by extension “profits” available for distribution, in the *Lee* case [1889]. The judges used Adam Smith’s distinction between “fixed” and “circulating” capital as the route to a new way of interpreting “capital”. Superficially, this was a similar pattern of going backward in time to interpret the words of a contemporary act that we saw in *Coltress*. What was significant was the fact that by pushing interpretation back into historical time, the Lords could side-step arguments that “profits” needed to be something specified in non-abstract terms or that tax and commercial measurements of profits should be the same.

In *Lee*, the Court of Appeal went backward not for the same definition of capital that would apply for taxation, but for a different, economic definition. One interpretation of this case is that the court actively sought to support broad social objectives: such as, the interests of social capital [Bryer, 1998] or unfettered rational movement of economic capital [French, 1977]. The court’s wish to create leeway for the definition of “profits” for dividend purposes potentially created conflicts with its obligation to protect the Exchequer, that is, to standardize (and probably maximize) the definition of taxable profits. Literal interpretation in much earlier historical contexts helped create legal meanings that taxpayers and litigants would have difficulty bringing together. Effectively, therefore, historical interpretation was a strategy to avoid the regulatory conflicts that might occur if other principles of statutory interpretation were applied, viz. ordinary meanings, or exporting a meaning for a word from one area of law to another. Especially after *Lee*, it would not have done at all, given the courts’ responsibility to “grant a revenue at all events”, for the permissive definition of “profits” in the dividend cases to migrate to income tax cases.

Judicial decisions across the regulatory range could be more easily reconciled if the courts kept meanings abstract and did not get too specific about particular measurement principles and practices. Therefore, the failure of late 19th century British courts to make detailed accounting rules to define “profits” and “capital” may not reflect a “slump in judicial self-confidence” [Maltby, 1999]. Arguably, this position left room for judicial manoeuvrability. The courts remained free to interpret concepts such as “profits”, “capital”, and “depreciation” in different ways for competing regulatory purposes, maintain the possibility of judicial law reform [French, 1977], and avoid the loss of legal control that tends to go along with reliance on formalist approaches [McBarnet and Whelan, 1992, p. 104]. The courts’

reluctance to calculate meant that judges could adopt calculations based on meanings that were defined by other parties who were not bound by case precedent or principles of statutory interpretation. They could also choose to ignore certain meanings and calculations. For example, supporting evidence in *Lee* on the meaning of "profits" that was derived from *Coltness* [fn. 22 *supra*] could be ignored because the abstract concepts were distinct. The judiciary avoided a regulatory conflict in the two spheres of its adjudication by pushing factual calculation onto others (e.g. by acceptance of calculation derived from company articles of association or by income tax calculations to be worked out by Revenue and local tax officials). Thus, they kept the flexibility to avoid inconsistent judgments.³¹

Paradoxically, once the essential difference between "profits" for tax and accounting purposes had been established with the *Coltness* decision, it was possible for the courts to institutionalize a link between the two practices of profit measurement. This was done in *Gresham* [1892] which decided that profits should be recognized according to "the ordinary principles of commercial accountancy" [Freedman, 1987]. This "commonsensical approach" [Boden, 1999] constrained a Revenue tendency to define every principle of tax calculation in its own terms, which had been reinforced by the *Coltness* decision. By then it was accepted in judicial law and Revenue practice that commercial net profits merely represented the starting point of a calculative process of adjustment that dealt with the matters expressly enumerated by legislation — including the 1878 depreciation allowance — and those matters necessary to reflect the essential differences between profit concepts for tax and accounting that had been clarified by case law, such as, the disallowance of accounting "depreciation". Subsequent debate before the courts extended, and sometimes reversed, the adjustments required to commercial accounting calculations to reflect the essential difference of the tax concept of profits [see Freedman, 1987, 1993, 1995, 1997]. The institutionalized connection created by *Gresham*, however, has ensured that the profit mea-

³¹ Of course, it is possible that judges in the dividend cases were accommodating their own vulnerabilities or lack of precise understanding of principles and practice. Accounting historians who have studied the dividend cases, and the responses to them, make clear the variability in the judges' grasp of the detailed accounting issues involved. In that sense, they may just have wished to keep away from complex calculation.

asures, while required to be essentially different, also remain essentially connected.

CONCLUSIONS

Judicial support gave the Inland Revenue the upper hand in tax administration. With this support, it became possible to construct *de facto* regulatory control of the income tax. Taxing practices based on writing, interpretation, and examination of texts, and extended calculation were reinforced. These practices formed the basis for the disciplinary power of the modern Revenue and supplanted taxation based on the exercise of sovereign power. This change had permanent effects on the way in which tax calculation was conceptualized in the UK and the process by which taxation was extracted from the taxpaying population. Through analysis of the tax depreciation cases we have begun to see the emergence of modern modes of tax governance. The cases also reveal the lingering importance of the historically specific concepts of “profits”, “property” and “capital” that underlie the early income tax.

A shift in the form of regulatory control over British taxation occurred after 1855 [Lamb, 2001]. Following Hoskin and Macve [1986, 1994], the change can be seen as a shift in modes of governance from one based on the exercise of sovereign power to one based on accountability. In this new accountability, the disciplining technologies of managers create self-disciplining subjects, who in turn reinforce and extend the disciplinary power of the managers.³² Hoskin and Macve base their theorizing on organizational and management studies of private sector business, but comparable changes can be discerned in public sector management.³³ The construction of accountability for income tax rests firstly on the regulator gaining the power to

³²This part of their theorising is based on an understanding of the nature and emergence of “disciplinary power” based on a reading of Foucault [1975], and as developed by others [including, Boland, 1987; Miller and O’Leary, 1987; Preston, 1989; Miller, 1990, 1994].

³³I am grateful to Keith Hoskin for helping to make this point clear. In describing my work [Lamb, 1997a], he writes: “The new tax regime is derived from a new application of the old *techne* of accounting, to “know” people as subjects in a new way, as income and profit “earners” — a knowledge which (like modern tax) can only be extracted from these subjects by getting them to render an account of their monetary value, which is then done via the accounts which either they keep or which are kept on them, and translated into a tax ‘return’” [Hoskin, 1997, p. 7].

regulate and then on the ability to define routines of regulated calculation. If such calculation becomes "regulating calculation", or internalized routines of accountability, for taxpayers, then those taxpayers become more knowable and governable and the taxing system becomes more autonomous and less reliant on the actual exercise of power by tax officials.³⁴ The shift in the form of regulatory control of income tax accelerates after the Revenue's *de facto* authority to define regulated calculation for tax purposes gains the support of the courts. Regulatory control over a large population of geographically dispersed taxpayers is *more* complete when based on disciplinary technologies than it would be if based on the exercise of sovereign power alone [Lamb, 2001].

The high degree of "voluntary compliance" that was a feature of mid- to- late 19th century British taxation [Daunton, 2001] and late 20th century British taxation [Preston, 1989] is a product, in part, of pervasive "regulating calculation." Analysis of the depreciation cases in this paper has permitted us to trace some of the ways that Inland Revenue regulators gained the power to regulate and then to define routines of regulated calculation. If accounting is a form of economic calculation with the potential to create disciplinary power [Miller, 1990], then it makes sense for us to investigate and understand how the routines of accounting calculation formed in tax practice. This paper has highlighted the ways that meanings for taxing words, principles, and practices have been contested and constructed in dealing with Schedule D and Schedule A businesses. By the end of the 19th century, British commercial accounting and tax practice had achieved a considerable degree of general acceptance and understanding of the meanings and calculations of "income" vs. "capital, as well as "profits" and "depreciation" in particular contexts.

Essential to the modern disciplinary power of the Revenue is comprehensive knowledge of the taxpayer gained through writing, examination, and calculation. The whole process of tax appeal to the courts is based on writing: first the case stated, then the judgments, next their dissemination, and finally their application as precedent. This process of appeal contrasts with the appeal process based on calling the taxpayer to account and

³⁴A distinction between "regulated calculation" and "regulating calculation" emerged as a form of shorthand from discussions with Keith Hoskin, and I acknowledge his contribution.

the final judgment of the General Commissioners that previously applied [Lamb, 2001]. The depreciation cases provide evidence that tax calculation was moving away from a reliance on estimation based on what was known and knowable about a business locally, to a reliance on information and calculations presented in written commercial accounts. Assessment in these cases was based on figures for profits and depreciation taken from accounts [*Forder, Handyside, Coltness*] or derived in collaboration with experts [*Leith Steam Packet*]. Although the courts judged the details of calculation to be matters of fact on which they were not required to make judgments, their decisions were used to support Surveyors' rationalization of what could be regarded as "fair and reasonable" allowance for wear and tear [*Leith Steam Packet*]. While it was certainly the case that these practices (especially the routine submission of accounts) had not yet become the norm across the wide range of taxpayers [Sabine, 1966, p. 138], it was significant that the general acceptability of the practices was presented in court to and by judges who had the power to define and enforce taxing practices.

The tax cases reveal how the Revenue asserted its technical authority over the commercial principles applied by many Commissioners. Appeals were brought by Surveyors who disagreed with the commercial basis of the decision by the Commissioners [*Forder*]. The courts accepted Revenue assertions of technical definitions and tax calculations in preference to taxpayers' commercial arguments, except in *Knowles* and *Caledonian Railway*, cases that created no lasting precedents. The creation of technical definitions, such as those articulated by Revenue counsel Dicey [*Knowles, Coltness*], transformed "profits" from something that could be estimated on the basis of judgment, local knowledge, and commercial understanding into something that had to be derived with precision. The derivation rested, first, on the close reading of historical texts and, then, careful calculation according to the application of prescribed rules of written legislation, case precedent, and tax returns. These technical practices of taxation were not practices that the General Commissioners were likely to find easy to lead. They were part-time, unpaid laymen, many of whom found it difficult to find the time to attend appeal hearings [e.g. SC, 1852a, q. 2159]. They relied upon their clerks and, increasingly, on the Revenue officers for legal knowledge and skills.

Before the depreciation cases, considerable social and political tension was created by the uncertainty over how profits

should be calculated for income tax purposes and the fact that local authorities adopted different practices in different parts of Britain. Grievances also focused on the less generous tax treatment of mining businesses compared with other trading enterprises. The court decisions made it clear that income tax profits would not equal commercial calculations. Reinforcement of Revenue authority and practices by the courts meant that income tax practice could and would become more uniform across Britain. The court decisions meant that mining companies were treated only marginally more harshly than trading companies by tax law. The principles established by the courts were not generous to taxpayers, but the outcomes created greater certainty and their publicity helped standardize and accustom taxpayers to the tax.

While the depreciation tax cases reveal how *de facto* taxing power began to shift in the direction of the Revenue, they also reveal just how slow the process of creating a new mode of governance over taxation was. The courts did not immediately accept all of the arguments and analyses of the Inland Revenue. In *Addie* and *Forder*, the courts accepted that the commercial concept of "profits" was modified by the express words of the Acts, but only in *Coltness* did the House of Lords accept the argument of essential difference. Legal decisions took time to be absorbed into practice, and might not be noticed if made by courts outside the jurisdiction in which the taxpayers, Commissioners, or judges operated. This was evident from the *Knowles* and *Caledonian Railway* cases. Inland Revenue interpretations of new law took a very long time to be understood and supported by the courts, and accepted by local Commissioners and taxpayers as guiding practice. It took 25 years for the Revenue's interpretation of the scope of the 1866 "transfer" of Schedule A No. III companies to Schedule D Case I to be accepted. In *Knowles* the court explicitly rejected the narrow interpretation articulated by Dicey, but the House of Lords finally accepted it in *Coltness*. The narrow scope of the 1878 wear and tear allowance took a decade and a half to sort out.

Use of case law for accounting history has been regarded as "particularly formidable" because "accounting principles and practices were discussed in a relatively large number of early business actions [that] span a bewildering variety of different causes" [Mills, 1993, p. 766]. Cutting a swathe of analysis and argument through the multitude of connections and lines of interpretation in these texts necessarily involves a narrowing of focus that risks a failure to notice matters of significance. This

paper represents a first attempt to make important links between the histories of accounting, tax practice, and judicial decisions that help explicate the construction of adequate regulatory control over British income tax. Undoubtedly there are many avenues of research left to explore.

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John McDonald
FLINDERS UNIVERSITY

TAX FAIRNESS IN ELEVENTH CENTURY ENGLAND

Abstract: Alongside the Roman census from Augustus' time and the ecclesiastical surveys or polyptychs of the 8th and 9th century Carolingian kingdoms, the Domesday Survey of 1086 occupies a most significant place in accounting history. Domesday Book, the outcome of the Survey, lists the incomes, tax assessments, wealth and resources of most estates in England and was used as a working accounting document by the monarch and public officials to raise taxes, distribute resources and consolidate power. Although the Domesday document itself survives, many details of its construction and use have been lost in the mists of time. This paper describes research to discover how taxes were levied and which estates and tenants received favorable treatment.

INTRODUCTION

In the accounting history literature, Godfrey and Hooper [1996] have convincingly argued that aspects of Domesday Book, the results of a survey commissioned by William the Conqueror, illustrate the concepts of accountability, decision-making and control.

Domesday Book served many purposes. It documented feudal tenancy arrangements and was a land register being used extensively to resolve land disputes in the courts. Indeed, the book's name derives from this use. The manuscript refers to itself as the "Discriptio", and it was only after Williams' death referred to as "Domesday Book", the book of last judgment, for

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in land disputes there was no appeal beyond its pages — land rights could be traced to Domesday Book but no earlier.

As well as being a legal document, the book had a financial and decision-making purpose. It lists the incomes, tax assessments, wealth and resources of most estates in England and was used as a working accounting document by the monarch and public officials to raise taxes, distribute resources and consolidate power. As Godfrey and Hooper [1996, p. 51] state “By providing a valuation and audit of the resources of the feudal tenants-in-chief in 1086, Domesday enabled William and his successors to optimize both their wealth, through fiscal policy and efficient use of the country’s resources, and their power within the feudal structure of medieval England. For the English monarchy of the period, Domesday served both accountability and decision-making needs”.

Together with other ancient surveys that assisted financial accountability, the Roman tax census during the four centuries following Emperor Augustus and the ecclesiastical polyptychs of the 8th and 9th centuries which were used for tax and accounting purposes, the Domesday Survey occupies a landmark position in accounting history. Godfrey and Hooper [1996, p. 39] argue, “Domesday represents a partial extension of and evolution from what might be broadly termed public sector accounting as practiced in both the Roman and Carolingian periods”.

Although the Domesday document itself survives, many details of its construction and use have been lost. This paper describes research to discover how the taxes were levied and which estates and tenants received favorable treatment. Domesday Book records the tax assessments for the geld, a non-feudal tax levied by the king. The tax assessments are reported in hides and fiscal acres and are often referred to as the hidage system. In this paper, frontier methods are used to investigate who, and which estates, received beneficial hidation, and what factors were associated with favorable tax assessments.

DOMESDAY ENGLAND AND THE DOMESDAY SURVEY

The Domesday Survey was carried out 20 years after William invaded England from France. By 1086, Norman rule had been largely consolidated, although only after rebellion and civil dissent had been harshly put down. The Conquest was achieved by an elite. It did not result in a mass movement of people, and, although the Normans brought new institutions and practices, these were superimposed on the existing order. Most of the

Anglo-Saxon aristocracy were eliminated, the lands of over 4,000 English lords passing to less than 200 Norman barons, with much of the land held by just a handful of magnates.

William I ruled forcibly through the Great Council. England was divided into shires, or counties, which were subdivided into hundreds. There was a sophisticated and long established shire administration. The sheriff was the king's agent in the county, royal orders could be transmitted through the county and hundred courts, and an effective taxation collection system was in place.

England was a feudal state. All land belonged to the king. He appointed tenants-in-chief, both lay and ecclesiastical, who usually held land in return for providing a quota of fully equipped knights. The tenants-in-chief might then grant the land to sub-tenants in return for rents or services, or work the estate themselves through a bailiff.

Manorialism was a pervasive influence, although it existed in most parts of England in a modified form. On the manor the peasants worked the lord's demesne in return for protection, housing, and the use of plots of land to cultivate their own crops. They were tied to the lord and the manor and provided a resident workforce. The demesne was also worked by slaves who were fed and housed by the lord.

Although Domesday Book records 112 boroughs, agriculture was the predominant economic activity, with stock rearing of greater importance in the south-west and arable farming more important in the east and midlands.

The Domesday Survey was commissioned on Christmas day, 1085, and it is generally thought that work on Domesday Book was terminated on the death of William in September 1087. The task was facilitated by the availability of Anglo-Saxon hidage lists. The counties of England were grouped into (probably) seven circuits. Each circuit was visited by a team of commissioners, bishops, lawyers and lay barons who had no material interests in the area. The commissioners were responsible for circulating a list of questions to land holders, for subjecting the responses to a review in the county court by the hundred juries, often consisting of half Englishmen and half Frenchmen, and for supervising the compilation of county and circuit returns. The circuit returns were then sent to the Exchequer in Winchester where they were summarized, edited and compiled into Great Domesday Book.

Unlike modern surveys, individual questionnaire responses were not treated confidentially but became public knowledge,

being verified in the courts by landholders with local knowledge. In such circumstances, the opportunities for giving false or misleading evidence were limited.

Domesday Book consists of two volumes, Great (or Exchequer) Domesday and Little Domesday. Little Domesday is a detailed original survey return of circuit VII, Essex, Norfolk and Suffolk. Great Domesday is a summarized version of the other circuit returns sent to the King's treasury in Winchester. (It is thought that the death of William occurred before Essex and East Anglia could be included in Great Domesday). The two volumes contain information on the net incomes (referred to as the annual values), tax assessments and resources of most manors in England in 1086, some information for 1066, and sometimes also for an intermediate year. The information was used to revise tax assessments and document the feudal structure, "who held what, and owed what, to whom".¹

The study described in this paper is based on data relating to 574 lay estates in the county of Essex in 1086. Essex was chosen because more detailed data are available on the counties described in Little Domesday, and the manorial entries for Essex are easier to interpret than those of Norfolk and Suffolk.²

¹Further background information on Domesday England is contained in McDonald and Snooks [1986, Chs. 1 and 2; 1985a, 1985b, 1987a and 1987b] and McDonald [1998]. For more comprehensive accounts of the history of the period see Brown [1984], Clanchy [1983], Loyn [1962, 1965, 1983], Stenton [1943, 1951]. Other useful references includes Ballard [1906], Darby [1952], [1977], Galbraith [1961], Hollister [1965], Lennard [1959], Maitland [1897], Miller and Hatcher [1978], Postan [1966, 1972], Round [1895, 1903], the articles in Williams [1987] and references cited in McDonald and Snooks [1986]. The Survey is discussed in McDonald and Snooks [1986, sec. 2.2], the references cited there, and the articles in Williams [1987]. The Domesday and modern surveys are compared in McDonald and Snooks [1985c].

²The data file was compiled by Eva Aker under the direction of the author with the aid of a Flinders University research grant. The file was compiled directly from Domesday Book entries in the Victoria County History of Essex which were checked against a facsimile of the Latin transcript and an English translation in the so-called Phillimore edition [Morris, 1975]. A general rule of thumb was developed that only entries for which (1) net income (annual value) is positive, (2) either ploughteams or livestock entries are positive (or both), and (3) there is a positive entry for at least one labour variable, were retained for analysis. In addition, seven other entries were deleted either because they were implausible or incomplete, and three others because no tax assessment was recorded. Further details are given in McDonald [1998].

EARLIER STUDIES OF THE GELD

The Domesday tax assessments relate to a non-feudal tax, the geld, thought to be levied annually by the end of William's reign. The tax can be traced back to the danegeld, which was introduced by King Ethelred in 911 to provide finance to bribe or fight the Danes. Originally the geld was a land tax assessed at so much per hide. A hide was traditionally the acreage needed to support a man and his family, conventionally 120 acres, but in practice variable from place to place depending on the fertility of the land. Oldroyd [1997] describes the role of hidage lists and Geld Rolls in public accounting during the Anglo-Saxon period and their significance for accounting history. By Norman times it is thought that, although it retained the nomenclature of a land tax, the geld was no longer solely a tax on land. In 1086 it was one of a number of public revenue sources and probably contributed about a quarter of the total public purse. The geld was a significant impost on landholders, the rate struck in 1083-4 of six shillings to the hide, implies the tax amounted to about 15 percent of the annual value of the average Essex lay manor.³

Domesday scholars have written extensively about the tax assessments. Much of the literature has been influenced by Round [1895], who considered the assessments to be "artificial", in the sense that they were imposed from above via the county and hundred with little or no consideration of the capacity of an individual estate to pay the tax. Round's view was largely based on a somewhat unsystematic and subjective review of the distribution of the assessments across estates, vills and the hundreds of counties.

In [1985a] and [1986, Ch. 4], Snooks and I argued that, contrary to Round's hypothesis, the tax assessments were based on a capacity to pay principle, subject to some politically expedient tax concessions. Similar tax systems operate in most modern societies and reflect an attempt to collect revenue in a politically acceptable way.

There is empirical support for our hypothesis. Using regression methods, we showed, for example, that for Essex lay estates about 65 percent of variation in the tax assessments could be attributed to variations in manorial annual values (which measure the net income accruing to the lord) or manorial resources, two alternative ways of measuring capacity to

³ Further information on the geld and related material are contained in McDonald and Snooks [1986, Ch.4].

pay. Similar results were obtained for other counties. Capacity to pay explains from 64 to 89 percent of variation in individual estate assessment data for the counties of Buckinghamshire, Cambridgeshire, Essex and Wiltshire, and from 72 to 81 percent for aggregate data for 29 counties [See McDonald and Snooks 1987a].

Although capacity to pay seems to explain most variation in tax assessments, some variation remains. Who was treated favorably? Which estates received a beneficial hidation? And what factors were associated with beneficial hidation? Clearly, a first step in addressing these issues is to develop a measure of beneficial hidation.

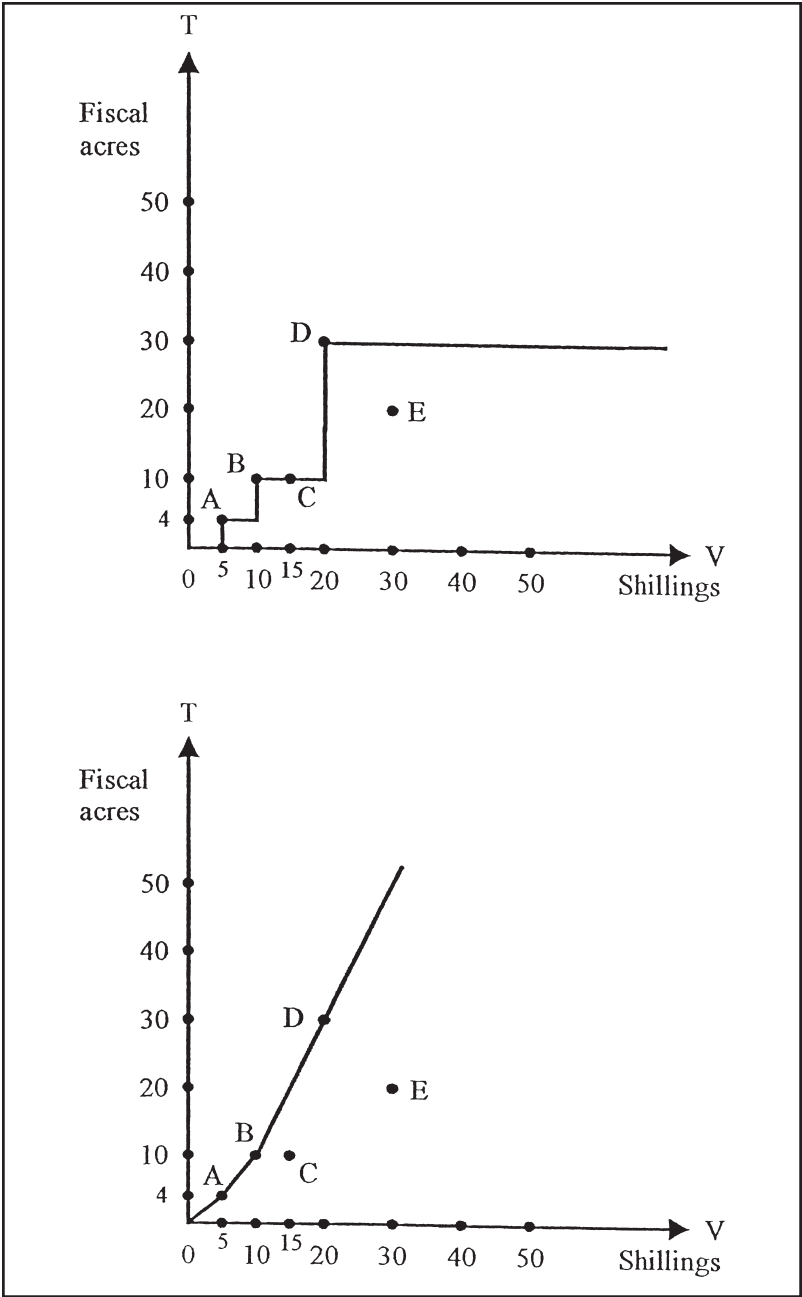
A simple and appealing measure is based on the idea that an estate has received beneficial hidation if it has a lower tax assessment than another estate with the same or lower annual value (annual value or net income being a measure of capacity to pay). More formally, the beneficial hidation index (BHI) for estate i , is defined as the ratio of the maximum tax assessment of all estates with the same or a lower annual value than estate i , to the actual tax assessment of estate i . A BHI value of one corresponds to no beneficial hidation, and a value greater than one to some beneficial hidation.

JUSTIFICATION OF THE BHI

Some insight into the plausibility of the BHI (just defined) can be obtained by employing the frontier methodology (sometimes used in production studies, see, for example, Lewin and Lovell, 1990). In Figure 1, A, B, C, D, and E indicate the tax assessments and annual values of five (fictitious) estates. (Estate A, for example, has an annual value of 5 shillings and tax assessment of 4 fiscal acres). To calculate the BHI for an estate, the maximum tax assessment for the estate's annual value is required. The annual values of the five estates are 5, 10, 15, 20 and 30 shillings, and the maximum assessment for estates with equal or lower assessments 4, 10, 10, 30 and 30 fiscal acres, respectively. The maximum assessment values for different annual values can be thought of as describing a "tax frontier".

The frontier that generates the BHI is illustrated in the upper diagram of Figure 1. It consists of the "steps", 0 to the point vertically below A, that point to A, the horizontal line from A to the point vertically below B, and so on. Estate BHIs are the ratio of maximum to the actual tax assessments. For estate E, the BHI=1.5, all other estates have a BHI=1. This frontier would be appropriate if the tax regime was one of constant tax assessment

FIGURE 1
Alternative Tax Frontiers



over annual value intervals (with, for example, estates with an annual value of 5 shillings and less than 10 shilling paying 4 fiscal acres; those with an annual value of 10 and less than 20 shillings, 10 fiscal acres, and so on), with some beneficial hidation.

Other tax frontiers and beneficial hidation indexes are plausible. For example, if the underlying tax regime consisted of multiple constant positive tax rate schedules (with, for example, estates with an annual value of 5 shillings and less than 10 shillings paying at one tax rate, those with an annual value of 10 and less than 20 shillings at a different rate, and so on), with some beneficial hidation, then the frontier is generated by starting at 0 and connecting points representing estates by line segments, so long as the slope of the segment is positive. This frontier is drawn in the lower diagram of Figure 1. 0 is connected to A, and A to B, because the line segments have positive slopes; but B is not connected to C and D not connected to E, because the slopes of the lines would not be positive (implying zero or negative marginal tax rates). Using this frontier, estates A, B and D have beneficial hidation indexes of one, the index for C is two, and for E, two and a half.

Unfortunately we do not know in detail how the Domesday tax assessments were formulated, so we do not know which is the most appropriate frontier, and hence beneficial hidation index.

It is reasonable to ask if it is possible, using empirical methods, to determine the “true” frontier. For example, is the true frontier the frontier that gives the closest fit to the data? Unfortunately, this may not be so. Casual inspection of Figure 1 indicates that the frontier in the upper diagram must always fit the data better than the frontier in the lower diagram (in the sense that the distances of the data points from the frontier cannot be greater and will sometimes be smaller), whether or not it is the true frontier (that is, whether or not the true tax regime is essentially one of constant tax assessment over annual value intervals).

In practice, if there are a reasonable number of observations, well-distributed over the annual values, frontiers and indexes will be similar. The chosen frontier measures beneficial hidation more conservatively (in the sense that an estate’s index will tend to be smaller when measured against it) than most others. A major advantage in using it is that it can easily be calculated using linear programming methods [see, for example, McDonald, 1998, pp. 41-56].

BENEFICIAL HIDATION IN ESSEX IN 1086

When the frontier was constructed from the tax and annual value data for the 574 Essex lay estates in 1086, 18 estates lay on the tax frontier and so had a BHI=1.⁴ Figure 2 gives the frontier, the numbers on the frontier being the identification codes of the estates that form the frontier.

FIGURE 2

Tax Assessment Frontier. Essex Lay Estates, 1086

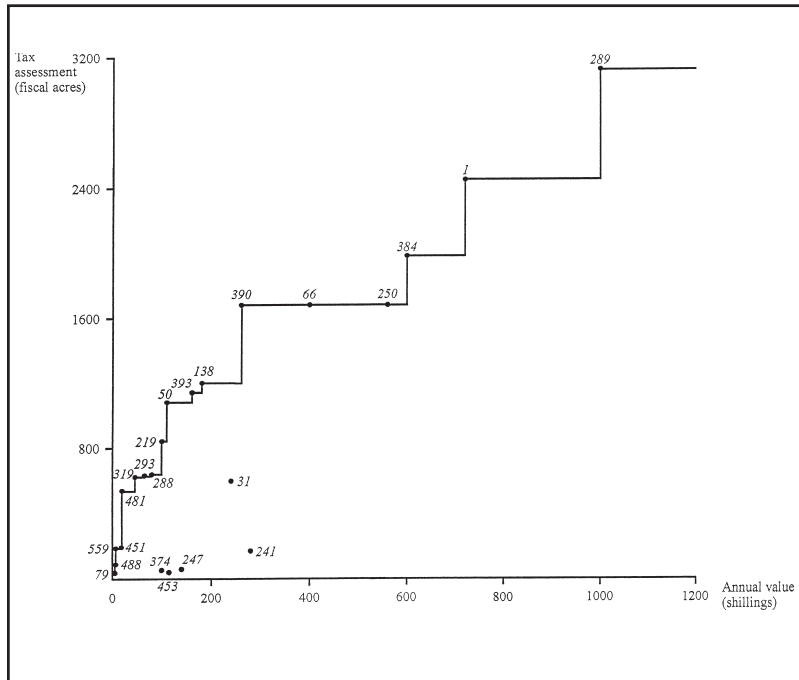


Table 1 gives the names of the estates and other information about them. For example, 1 refers to Fobbing an estate with an annual value of 720 shillings and a tax assessment of 2445.5 fiscal acres. All other estates are represented by points below the frontier. A few are located by a dot and their identification code, information about these estates being contained in Table 2.

⁴For any annual value, the frontier indicates the maximum tax assessment of all estates with that or a lower annual value, and an estate's BHI is the ratio of the maximum assessment to the actual assessment of the estate.

TABLE 1
Characteristics of Estates with a Beneficial Hidation Index (BHI) of one. Essex Lay Estates, 1086

Estate	BHI	Tax assessment	Frontier assessment	Annual value	Tenant-in-chief	Tenancy	Hundred
1 Fobbing	1	2445.5	2445.5	720	Count Eustace	Demesne	Barstable
50 Tolleshunt Guines	1	1081	1081	110	Count Eustace	1 sub-tenant	Thurstable
66 Elmdon	1	1680	1680	400	Count Eustace	1 sub-tenant	Uttlesford
79 Lt. Bentley	1	42.5	42.5	3	Count Alan	1 sub-tenant	Tendring
138 Wickford	1	1200	1200	180	Suen of Essex	Demesne	Barstable
219 Purleigh	1	840	840	100	Hugh de Montfort	Demesne	Dengie
250 Woodham Ferrers	1	1680	1680	560	Henry de Ferrariis	Demesne	Chelmsford
288 Stow Maries	1	637	637	65	Geoffrey de Magna Villa	1 sub-tenant	Dengie
289 Saffron Walden	1	3120	3120	1000	Geoffrey de Magna Villa	Demesne	Uttlesford
293 Weneswic	1	640	640	80	Geoffrey de Magna Villa	1 sub-tenant	Dengie
319 Wivenhoe	1	625	625	46	Robert Greno	1 sub-tenant	Lexden
384 Debden	1	1980	1980	600	Ranulf Peverel	Demesne	Uttlesford
390 Down	1	1680	1680	260	Ranulf Peverel	demesne	Dengie
393 Stangate	1	1140	1140	160	Ranulf Peverel	1 sub-tenant	Dengie
451 Ardleigh	1	195	195	17.67	Ranulf brother of Ilger	1 sub-tenant	Tendring
481 Leyton	1	540	540	20	Robert son of Corbutio	demesne	Becontree
488 Paglesham	1	90	90	5	Robert son of Corbutio	1 sub-tenant	Rochford
559 East Donyland	1	188	188	7	Ilbodo	demesne	Lexden

Note: Tax assessments are measured in fiscal acres and annual values in shillings.

TABLE 2
Characteristics of Selected Estates that Received Beneficial Hidation. Essex Lay Estates, 1086

Estate	BHI	Tax assessment	Frontier assessment	Annual value	Tenant-in-chief	Tenancy	Hundred
31 Boxted	2.00	600	1200	240	Count Eustace	demesne	Lexden
241 Stambn/Toppesfld	9.88	170	1680	280	Hamo dapifer	demesne	Hinckford
374 Fairsted	15.27	55	840	100	Ranulf Peverel	1 sub-tenant	Witham
247 Tilley	18.02	60	1081	140	Henry de Ferrariis	demesne	Dunmow
115 How Hall	19.23	43.6	625	50	Richard son of C. Gilbert	1 sub-tenant	Hinckford
453 Stevington End	25.44	42.5	1081	115	Tithel the Breton	demesne	Freshwell H-H
500 Sibil Hedingham	25.60	25	640	80	Roger Bigot	1 sub-tenant	Hinckford
28 Toppesfield	36.00	15	540	20	Count Eustace	1 sub-tenant	Hinckford
207 Radwinter	36.00	15	540	30	Eudo dapifer	1 sub-tenant	Freshwell H-H
555 Tending	36.00	15	540	20	Moduin	demesne	Tending
395 Prested	37.60	5	188	12	Ranulf Peverel	1 sub-tenant	Lexden
195 Broxted	71.11	9	640	80	Eudo dapifer	1 sub-tenant	Dunmow

Note: Tax assessments are measured in fiscal acres and annual values in shillings.

Figure 3 exhibits the BHI histogram. Three percent of estates had a BHI=1, about a quarter a BHI less than two, roughly a half an index value less than three, and three quarters a value less than five. Some estates had high BHI values. Seven percent had values of ten or more, with 195 Broxton and largest value of 71.11.

FIGURE 3
Beneficial Hidation Index (BHI) Histogram.
Essex Lay Estates, 1086

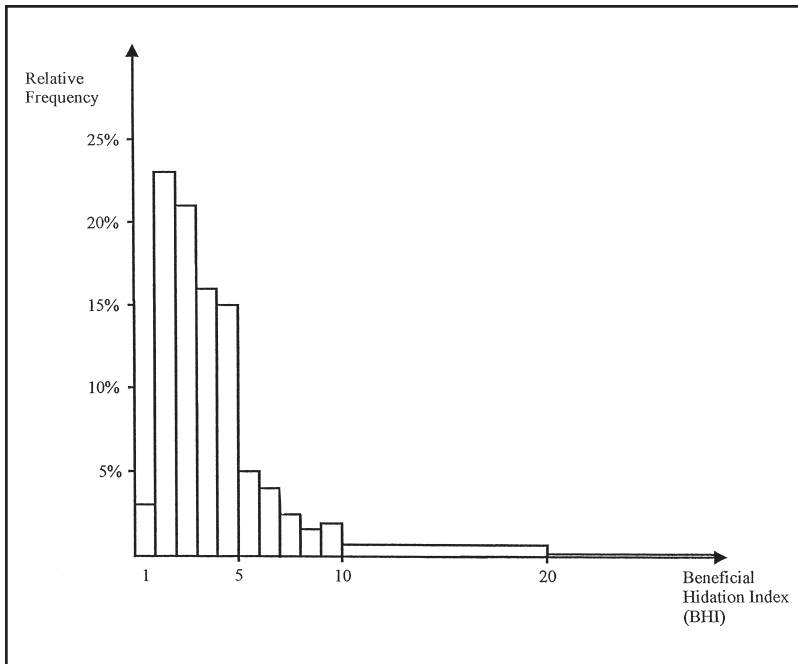


Table 1 provides summary information about the 18 estates lying on the frontier. No obvious patterns are evident for these estates. Some tenants-in-chief were major magnates, such as Count Eustace of Boulogne, Count Alan of Brittany, Suen, Sheriff of Essex and Geoffrey de Magna Villa, Sheriff of Middlesex, but several estates had tenants-in-chief who were less significant lords. In terms of tenancy, nine estates were held in demesne (that is, were worked by the tenant-in-chief) and nine had a single sub-tenant. Five of the frontier estates were in the hundred of Dengie, three in Uttlesford, two in Barstable, Lexden and

Tendring, and one in each of Rochford, Beacontree, Chelmsford and Thurstable. The estates seem to be well-distributed over the hundreds.

Turning to the estates with very high BHIs (greater than 18), from Table 2 it can be seen that they range from 395 Prested with a small annual value of only 12 shillings to a relatively large estate 247 Tiltey with an annual value of 140 shillings (140 shillings exceeds the annual value of more than three quarters of the estates in the sample). Of the nine estates with a BHI greater than 18, most had minor lords as tenants-in-chief, six were sub-tenancies and three held in demesne. Three estates were in Hinckford hundred, two in Dunmow, two in Freshwell half hundred and the others in Tendring and Lexden hundreds.

In footnotes to the Victoria County History entries for Essex [VCH, 1903], Round commented that four of the nine estates with very high BHIs had abnormal or nominal assessments. (These were 195 Broxted, 247 Tiltey, 28 Toppesfield and 500 Sibil Hedingham). He also commented on the low assessments of other estates with smaller BHIs.⁵ Round's comments are rather unsystematic. By calculating BHIs for each estate it is possible to identify estates with low or abnormal assessments in a more comprehensive fashion.

STATISTICAL ANALYSIS OF FACTORS AFFECTING BENEFICIAL HIDATION

In the previous section the characteristics of estates with extreme BHI values were examined. Results of more comprehensive analyses of factors associated with beneficial hidation are contained in Tables 3, 4 and 5.

Table 3 lists the mean BHI of estates of the 18 largest tenants-in-chief (those that had more than 10 estates in Essex). Eudo dapifer has the largest mean value (7.87). The deviation of this value from the overall mean (4.35) is 3.52. Notice, however, that the standard deviation of Eudo dapifer's mean BHI is large (3.09). The high mean value is mainly due to the high BHIs of two of Eudo dapifer's estates: 195 Broxted (BHI=71.11) and 207 Radwinter (BHI=36.00). Richard, son of Count Gilbert also has

⁵ Examples are the assessments of 374 Fairsted (BHI=15.27) described as "strangely low" [VCH, 1903, footnote 4, p. 527], 571 Gestingthorp (BHI=8.00) also referred to as "strangely low" [footnote 9, p. 564], 241 Stambourne and Toppesfield (BHI=9.88) described as "an almost nominal amount" [footnote 4, p. 502] and 273 High Easter (BHI=3.26) "a very low hidation" [footnote 4, p. 509].

a high mean BHI (7.27), which is significantly greater than the overall mean.

Those who were not leniently treated include Robert, son of Corbutio (mean BHI=2.06), Robert Greno (mean BHI=2.73), Ralf Baignard (mean BHI=2.87), Ranulf, brother of Ilger (mean BHI=2.94) and Hugh de Montfort (mean BHI=2.97).

TABLE 3
Mean BHI of Estates of 18 Largest Tenants-in-chief.
Essex Lay Estates, 1086

Tenant in chief	Mean BHI	Standard deviation	Deviation from overall mean	Number of estates in sample
Count Eustace	4.25	0.56	-0.10	71
Suen of Essex	4.19	0.48	-0.16	57
Geoffrey de Magna Villa	3.55	0.31	-0.80	42
Robert Greno	2.73	0.29	-1.62	44
Richard son of Count Gilbert	7.27	0.88	2.92	29
Ranulf Peverel	4.26	1.03	-0.09	37
Ralf Baignard	2.87	0.37	-1.48	29
Eudo dapifer	7.87	3.09	3.52	24
William de Warene	3.93	0.46	-0.42	18
Ranulf brother of Ilger	2.94	0.41	-1.41	17
Hugh de Montfort	2.97	0.47	-1.38	17
Hamo dapifer	4.33	0.66	-0.02	15
Peter de Valognes	4.76	1.31	0.41	14
Aubrey de Ver	4.76	0.82	0.41	16
Robert son of Corbutio	2.06	0.35	-2.29	11
Count Alan	4.50	1.13	0.15	9
Roger de Ramis	5.66	1.17	1.31	12
John son of Waleram	5.34	1.14	0.99	8
Others	4.77	0.51	0.42	104

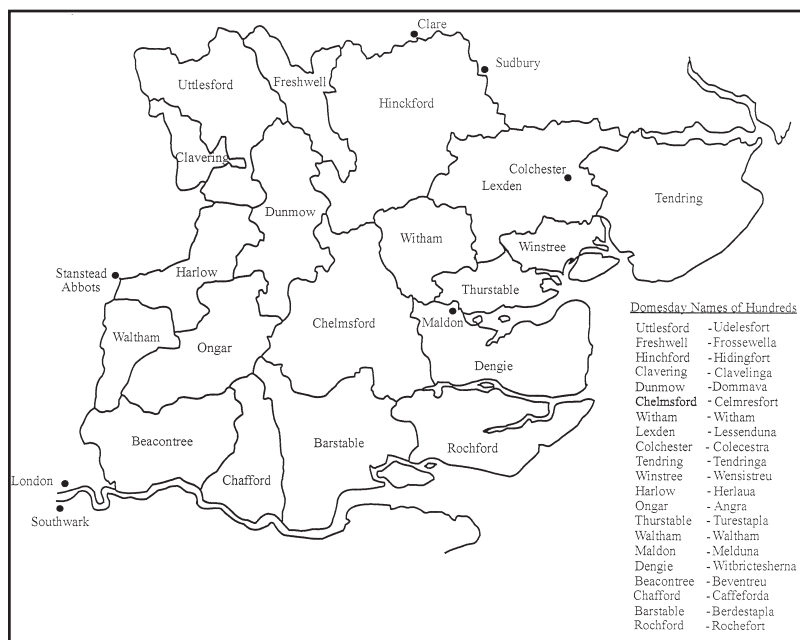
There is a clear tendency for the tenants-in-chief with the largest number of estates in Essex to have less favorable assessments. 10 of the 12 largest tenants-in-chief have a mean BHI below the overall mean (4.35), and all but one of the remaining six tenants-in-chief a mean above the overall mean. The vast majority of tenants-in-chief fall in the 'other' category. Their mean BHI is also above the overall mean, indicating that they tended to be treated more leniently.

A more objective way of assessing whether, in general, tenants-in-chief were treated equally is to carry out a statistical test using the full sample of observations. A robust statistical test of

the null hypothesis that the mean BHIs for the tenants-in-chief are equal, resulted in rejection of the null at the five and one percent significance levels.⁶ The test indicates that who the tenant-in-chief was is a significant factor influencing how estates were taxed, with some, mainly smaller, tenants-in-chief receiving more favorable treatment than others.

Figure 4 is a map indicating the Essex hundred divisions and Table 4 gives a breakdown of mean BHI by hundreds. A statistical test indicates that the BHI varied significantly (at the five and one percent levels) with hundred location.⁷ Hundreds

FIGURE 4
Domesday Essex Hundreds



⁶The test was carried out by regressing the BHI on tenant-in-chief dummy variables taking the value 1, if the tenant-in-chief held the estate; 0, otherwise. Since the regression diagnostics indicated heteroskedasticity in the disturbances, White's [1980] heteroskedasticity-consistent test was used. On the null, the test statistic is asymptotically distributed as a F-distribution with 18 and 555 degrees of freedom. The test statistic value was 4.293 which, to five decimal places, has a p-value of zero.

⁷The test was carried out in a similar way to the test for equality of the tenant-in-chief means (using White's method, see previous footnote). The test statistic value (asymptotically F-distributed with 21 and 552 degrees of freedom on the null) was 11.085, which, to five decimal places, gives a p-value of zero.

for which estates received milder assessments included Freshwell half hundred (mean BHI=8.94), Hinckford (mean BHI=7.43), Dunmow (mean BHI=6.60), Lexden (mean BHI=5.57) and Maldon half hundred (mean BHI=5.40). Those less-well treated were Beacontree (mean BHI=1.55), Dengie (mean BHI=2.34), Clavering hundred and half hundred (mean BHI=2.37), Winstree (mean BHI=2.38), Waltham (mean BHI=2.39), Chafford (mean BHI=2.43), Chelmsford (mean BHI=2.52) and Barstable (mean BHI=2.55).

TABLE 4**Mean BHI of Estates by Hundred. Essex Lay Estates, 1086**

Tenant in chief	Mean BHI	Standard deviation of mean	Deviation from overall mean	Number of estates in sample
Barstable	2.55	0.21	-1.80	35
Beacontree	1.55	0.10	-2.80	9
Chafford	2.43	0.39	-1.92	12
Chelmsford	2.52	0.14	-1.83	48
Dengie	2.34	0.25	-2.01	41
Dunmow	6.60	1.44	2.25	48
Clavering hundred and half hundred	2.37	0.33	-1.98	10
Freshwell half hundred	8.94	2.18	4.59	17
Harlow	3.61	0.88	-0.74	18
Harlow half hundred	2.97	0.77	-1.38	3
Hinckford	7.43	0.67	3.08	73
Lexden	5.57	1.21	1.22	31
Ongar	5.09	0.51	0.74	34
Rochford	4.10	0.57	-0.25	36
Tendring	3.74	0.74	-0.61	48
Uttlesford	2.90	0.27	-1.45	39
Waltham	2.39	0.80	-1.96	4
Winstree	2.38	0.26	-1.97	15
Witham	4.83	0.75	0.48	26
Maldon half hundred	5.40	3.60	1.05	2
Thunreslau half hundred	3.30	0.72	-1.05	3
Thurstable	2.89	0.36	-1.46	22

The above analysis indicates that all estates were not treated equally, but that tax treatment varied significantly across tenants-in-chief and the hundreds. An obvious question to ask is, if, when we allow for the hundred effect, the tenant-in-chief effect

is still significant, and, if, when we allow for the tenant-in-chief effect the hundred effect remains significant. Extending the argument we could examine the relationship between the BHI and all factors that might plausibly be expected to affect it and for which information is available at the estate level. Multiple regression could then be used to estimate the relationship and test whether one factor (for example, who the tenant-in-chief was) significantly affects the index when all other factors are controlled for.

This approach was implemented. As well as who the tenant-in-chief was and hundred location, information is available, estate by estate, on whether the estate was close to an urban center, the size of the estate, the kind of agriculture practiced and the tenure arrangement on the estate, all factors that could affect an estate's tax assessment. Table 5 exhibits the main results of a regression of the BHI on variables measuring these characteristics.⁸ Details of the implementation of the hidage system are now largely unknown, so the regression will provide empirical evidence as to whether particular groups or activities received special treatment, and, given these special considerations, whether the assessments were evenly distributed over the county.

The results show that the tenant-in-chief and hundred effects remain significant when other factors are allowed to vary in the multiple regression. Whether the estate was close to Maldon or Colchester was also a significant factor. The BHI for

⁸ Tenant-in-chief was indicated by 18 dummy variables (the i th, $i=1 \dots 18$, taking the value 1, if the i th largest tenant-in-chief held the estate; 0, otherwise; the intercept measuring the effect when none of the 18 largest tenants-in-chief held the estate), and the hundred location by 21 dummies (with the intercept measuring the effect of location in Thurstable hundred). Colchester and Maldon were the main towns in Essex. The effect of proximity to an urban centre was measured by a dummy variable, taking the value 1, if the estate was in an approximate six mile radius of Colchester or Maldon (allowing for topology); 0, otherwise. Size was measured by the single best indicator of the economic size of an estate, the estate's annual value. An index of whether production was mainly arable or grazing is given by the grazing/arable ratio, defined as livestock less cattle and beasts (which were required for ploughing) divided by the number of ploughteams on the estate. (Livestock less cattle and beasts is a weighted average of swine, sheep and goats with prices as weights. Three estates had no ploughteams. For them, the ratio was set at 2000, the largest ratio value for estates with some ploughteams being 1376). Finally, tenure was measured by dummy variable taking the value 1, if the estate was held in demesne; 0, otherwise. Test statistics are heteroskedasticity-consistent tests statistics obtained by White's [1980] method.

TABLE 5
Regression of BHI on Estate Characteristics.
Essex Lay Estates, 1086

	Test statistic	Distribution on null	P-value
Tenant-in-chief effect	1.857*	F(18,530)	.017
Hundred effect	5.164**	F(21,530)	.000
Urban centre effect	-3.1**	<i>t</i> (530)	.002
Size (annual value) effect	-4.0**	<i>t</i> (530)	.000
Kind of agriculture (grazing/ arable ratio) effect	-1.1	<i>t</i> (530)	.255
Tenure effect	-2.2*	<i>t</i> (530)	.028

Note: The tests are heteroskedasticity-consistent tests [see White, 1980].

* indicates significant at the five percent level and

** significant at the one percent level. $R^2=.17$

estates close to these towns was, on average, 1.73 lower than for other estates. Economic size (measured by annual value) of the estate also significantly affected the index value. A large estate (with an annual value of 320 shillings) had an average index value 1.80 less than a small estate (with an annual value of 20 shillings). Whether or not an estate was held in demesne was a significant factor at the five percent level. Estates held in demesne, on average, had a BHI 0.91 less than those that were sub or mesne-tenancies. The variable measuring the mix of arable and grazing agriculture on an estate was not a significant correlate.

CONCLUSION

The paper has presented the results of an investigation into the incidence of favorable tax assessment (hidation) in Domesday Essex. Frontier methods were used to derive a measure of beneficial hidation, and estates with favorable and unfavorable assessments identified. Tenants-in-chief and local areas (hundreds) of the county with lenient assessments were discovered, and regression methods used to assess the significance of the association of characteristics of estates and beneficial hidation. Factors significantly associated with beneficial hidation were the tenant-in-chief holding the estate (hidation tended to be less beneficial for the tenants-in-chief holding a large number of estates in Essex), the hundred location,

proximity to an urban center (estates remote from the urban centers being more favorably treated), economic size of the estate (larger estates being less favorably treated) and tenure (estates held as sub-tenancies having more lenient assessments). The kind of farming undertaken (arable or grazing) was not a significant factor.

The details of the levying of the geld in 1086 are largely lost in time, but the evidence clearly indicates that the manorial tax assessments were based on a capacity to pay principle (as measured by the manor's annual value), and the analysis of estate BHIs shows that other factors also had a significant influence.

In most tax systems, certain groups or activities receive concessions and the administrative process induces unevenness in the assessments. The BHI analysis indicates that, allowing for the capacity of an estate to meet the tax, some estates were indeed favored above others. The results show that some tenants-in-chief were treated more leniently than others, and, interestingly, it tended to be the tenants-in-chief holding fewer rather than more estates in the county. At the margin, the assessment system may have tended to favor the less wealthy because, it was also found that smaller estates and those held by sub-tenants received lower assessments, and urban estates (often held by the wealthy), higher assessments.

The fact that there was a significant hundred assessment differential, suggests that administrative factors affected the hidage system. This could have been because the assessments were made at different dates or with (slightly) more rigor in some hundreds than others. As for concessions being given when particular activities were undertaken, the regression provides no evidence of this. In particular, the tax system did not favor arable activity over animal husbandry or vice versa.

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INTERFACES

Richard Mattessich
UNIVERSITY OF BRITISH COLUMBIA

THE OLDEST WRITINGS, AND INVENTORY TAGS OF EGYPT

Focal Text:

Günter Dreyer's *Umm El-Quaab I—Das prädynastische Königsgrab U-j und seine frühen Schriftzeugnisse* (1998)

Abstract: Günter Dreyer's *Umm El-Quaab I—Das prädynastische Königsgrab U-j und seine frühen Schriftzeugnisse* presents comprehensively the results of archaeological diggings in the tomb U-j. It also outlines Dreyer's claim to have discovered the origin of writing. The primary aspect of this review essay is to draw the attention of accounting historians to Dreyer's book and to the claim therein to have discovered the earliest known writing. Since this discovery is closely connected to an accounting function (though in a somewhat different way from that of the Sumerian proto-cuneiform writing), a review of Dreyer's book is well justified. Dreyer's claim is based on a series of small inventory tags (identifying in proto-hieroglyphics the provenance of various commodities) found in the tomb of King Scorpion I (c.3400 B.C. to 3200 B.C.).¹ Another aspect of this review is a discussion of the controversy surrounding Dreyer's claim and the counter-hypothesis of accounting archaeology, which sees in the token-envelop accounting of Mesopotamia the origin of writing.

Acknowledgment: I am obliged to Dr. Günter Dreyer, Director of the German Archaeological Institute in Cairo, for permission to reproduce the pictures in Figure 1, as well as to the publisher, the Verlag Philipp von Zabern, for the consent to translate some passages of this book into English. Further thanks go to Professor John Baines (Oxford University) for valuable advice, and to the Editor, Professor Stephen Walker, and Professor Denise Schmandt-Besserat for helping to shape this essay. Finally, I gratefully acknowledge support from the Faculty of Commerce and Business Administration of the University of British Columbia and from the Social Sciences and Humanities Research Council of Canada.

¹King Scorpion I belongs to the so-called "predynastic" kings of southern Egypt; about most of whom little is known. However, Scorpion appears to

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DREYER'S BOOK AND ITS BACKGROUND

The tomb U-j (supposedly of King Scorpion I, c.3400 B.C. to 3200 B.C.) was discovered in 1988 in the royal cemetery of Umm el-Quaab (the burial site of the predynastic kings of Egypt) near Abydos. The diggings and resulting studies apparently continued until 1994 or beyond. Dreyer's book [1998, in English translation: *Umm El-Quaab I—The Predynastic Royal Tomb U-j and Its Early Writing-Evidence*] is a typical archaeological work, reporting numerous and fascinating details — although mostly of interest to Egyptologists. Its content is comprehensive, including six chapters devoted to the Report of Diggings and Architecture, five chapters examining ceramics and seven focused on smaller items found. The book's literature references are highly specialized. Indeed, they seem to be cryptic to laypersons unfamiliar with the six volumes of the *Lexikon der Ägyptologie* [Helck et al., 1975-1986] and other reference works of Egyptology.

However, the relevance of this esoteric book to accounting history can be justified for at least two reasons. First, the evidence that the excavated proto-hieroglyphics (claimed to be the earliest genuine writings) were inscribed on inventory tags, thus arising out of the need to convey some accounting information. Second, the fact that the competing source of early writing and its precursors — that emerged in Mesopotamia and the Fertile Crescent — also arose out of the need for accounting. The Mesopotamian token accounting and token-envelop accounting systems have previously been identified as the immediate ancestors of proto-cuneiform and cuneiform writing [see, Schmandt-Besserat, 1977, 1992; Nissen et. al, 1993]. Thus the question arises which writing system has chronological priority: the Mesopotamian pre-cuneiform system, manifested in token- and token-envelop accounting and the subsequent proto-cuneiforms, or the Egyptian proto-hieroglyphic system which

have been an exception. Thus Breasted (1964: 35) writes regarding this predynastic period: "From the southern kingdom, however, not a single king is known by name, it be that of Scorpion, who appears on a few fragments of this ancient times, and who was deemed to be a mighty chieftain of the south" (translated). This limited knowledge has greatly improved since the first edition of Breasted's well-reputed book. So, for example, Scorpion's picture appears as a relief on the fragment of an ancient votive macehead which shows him opening a breach in a dyke, enabling the floodwater to irrigate the land [see Aldred, 1984, pp. 70-71 and picture 37].

precipitated on ancient inventory tags? This question becomes all the more important, as *traditionally* the emergence of cuneiforms was assumed to be about 100 years before that of hieroglyphics:

The earliest known writing dates to shortly before 3000 B.C. and is attributed to the Sumerians of Mesopotamia. . . . Because the earliest writing is logographic, it can be read only in vague terms, but the principle of phonographic transfer is apparent and was well on its way to become logo-syllabic. Egyptian hieroglyphic writing is known from about *a hundred years later*, and it is also the earliest authentication of the principle of phonetic transfer. [Bram et al., 1979, p. 322; *italics added*].

In his Introduction, Dreyer points out that the findings of the *royal* tomb U-j shed entirely new light on the particular predynastic period, called "Naqada III". But he does not fail to emphasize the hypothetical nature of some of the interpretations presented:

The interpretation of this, in part, very new material, particularly its writing evidence [*Schriftzeugnisse*], and its implications regarding the administrative organization and the royal succession are bound to be hypothetical in many details. A limitation to present merely undisputed facts would have meant to renounce in advance the possibility of further amendments resulting from the discussion and critique.

The evaluation of the interpretation here presented should not merely rely on the understanding of details; it is more important how they fit into the entire picture, the consistency of which forms the basis for the partly hypothetically inferred details [Dreyer, 1998, p. 1, translated].

Part 1 (Chapters 1 to 6) of Dreyer's book deals with the topography, history and architecture details of the tomb U-j (supported by many drawings) together with an inventory of the individual rooms. Part 2 (Chapters 7 to 11) discusses the numerous local and imported ceramic pieces found in the tomb (again supported by many drawings). Most of these ceramics were jugs or fragments of jugs, occasionally with inscribed signs. Here we already find some indication and interpretation about the purpose of those signs. Part 3 concerns smaller objects, predominantly inventory tags [*Anhängetäfelchen*] of ivory,

bone and stone. Some of these were engraved with number markings; others with a variety of pictures (figures of men, animals, trees and other objects) that were interpreted as early writings. These tags are deemed to be the forerunners of those excavated much earlier, although belonging to later archaeological periods (e.g., the King Narmer period). The latter, “younger” tags are occasionally of larger size and not only of ivory and bone, but occasionally also of ebony and other woods. The comparison between older and “younger” tags leads to an interpretation important from the point of view of writing.

Dreyer’s book is richly illustrated with meticulous descriptions of each object depicted. It contains 106 Exhibits (*Abbildungen*). Some exhibits consist of several drawings, some contain a dozen or more. Further, the book contains an Index of Written Symbols of over one hundred signs [pp. 183-187]. The Appendix shows a few more Exhibits, and the Tables 1-47 [*Tafeln*; unpaginated] offer 35 photographs of digging sites, more than 125 photographs of jars and their shards and designs, hundreds of additional photographs of other objects, used for games and other purposes.

From an accountant’s point of view, the most important drawings (with descriptions and explanations, [pp. 113-145]) as well as corresponding photographs [Tables 27-35] are those of 190 tags of different sizes. All of these have one round perforation for tagging on some item of inventory [cf. Figure 1]. According to Dreyer, the major purpose of tagging was to identify the object’s provenance (or the quantity, in case of number tags). Of these tags, some 43 contain only numerical signs. The remaining tags bear various figures (sometimes two or three on one tag) of people (hunters with bow and arrow, wrestlers, etc.), animals (aardvarks, canines, cobras and other snakes, elephants, felines, fish, hedgehogs, hyenas, scorpions, snails, heads of rams and oryx, various kinds of birds such as cranes, ducks, geese, herons, ibis, falcons and unidentified smaller birds), plants (ferns, palms, reeds, trees) and other objects (bags, boats, buildings, earth, furniture, heaven, garments, mountains, thrashing-floors, water, weapons, or things difficult to identify).

The tags are inscribed on one side only — save for a few exceptions that may have been recycled. Similar to inventory labels, these were attached to bags, boxes or other containers holding commodities such as linen, oils, etc. The tags served to identify either the place (such as a city) or the institution (such

as a royal granary) of the commodity's provenance or, in case of number tags, the quantity or size of the object. Dreyer [1998, p. 136] points out that these tags, together with inscriptions on jars and other containers, constitute the most important findings. Most of them stem from the diggings on U-j, although some come from previous excavations (as far back as the field-work of E. Amélineau [1850-1915] and Sir W. M. Flinders Petrie [1853-1942]). The highlight of Dreyer's book might be the following passage:

As most of the signs manifest themselves as hieroglyphics in the dynastic period [i.e., after 3170 B.C. or so], and since their later arrangement can already be observed in the beginning, it makes sense to take them, at least in part, not simply as symbols/markers, but to read them like hieroglyphics. . . . Also other groups of signs can be read with the same phonetic values. . . . The stork beside the chair (No. 103 [cf. our Fig. 1]. . . ba-st = Basta. The fact that names of places occur among the signs, can be proven on a non-decipherable (*nicht lesbaren*) sign, the wrestlers (No. 44, X 188), which are [also] inscribed as a hieroglyphic, identifying a place on the pallet of cities in one of the city-rings (Table 43a). A series of tags with the combination of tree + animal can be read, similarly to inscriptions on vessels, as designations of commodities that are named after their originator. . . . Starting from these preconditions, the following readings and interpretations of the individual signs are listed. Although it is often difficult to decide whether a sign is an ideogram or a phonogram. In some cases only one definitive interpretation is possible. For an understanding of some groups of signs, particularly those that stand alone, there are, unfortunately, no hints [Dreyer 1998, p. 139, translated].

Hence Dreyer interpreted a few of these signs as genuine ideographic writing, standing for inscriptions with phonetic values (in contrast to mere pictographs representing concrete objects). Some of the tags contain symbols that were not found in any later writings. Others had symbols resembling hieroglyphic characters (such as the last tag of Figure 1, the bird above two horizontal lines and a ring). A third group of labels could be interpreted indirectly. For example, the signs on the first tag (Figure 1) could refer to a plantation (the tree) belonging to a king or temple (considering that the "Chief of the Westerners", a local god of death, was identified by a dog-like animal). The chair and stork on the second tag, phonetically

FIGURE 1

Sketches (enlarged) of Typical Pre-Dynastic Egyptian Inventory Tags From the Tomb U-j (of King Scorpion I)



The originals are depicted in the photographs No. 75/Table 30; No. 103/Table 31; and No. 142/Table 33; No. 139/Table 33 (left to right) of Dreyer (1998). Courtesy of Dr. Günther Dreyer and the Verlag Philipp van Zabern, Mainz.

interpreted, would mean “ba-st” or “Basta” (possibly a city in the Nile Delta). However, Dreyer [1998, p. 137] points out that the tags or labels (*Etiketten*) discovered by him, resemble closest those previously unearthed (although pertaining to a later period) that were called “simple” labels (as distinct from other categories, such as annalistic labels, labels for festivities, and abbreviated annalistic labels).

NUMERALS

The description of numerals in Dreyer [1998, pp. 193-194] covers less than a full page (including 16 small sketches on p. 139). It is meager in comparison to Schmandt-Besserat's [1992, pp. 184-194] treatment of numerals and counting in ancient Sumer. Thus the 43 sketches of number tags [Dreyer, 1998, pp. 115-117 and their photographs on Tables 27-28] are by no means fully explained. We mainly learn that the vertical and horizontal lines as well as the spirals on tags refer to numerals (already known from another Naqada tomb), and that they served to determine the quantity or size of the object to which they were attached.

It seems that traditionally a horizontal line (or impression) stood for one unit, a vertical line for ten units and a spiral for hundred units. Dreyer [1998, p. 139] is not completely clear on this score, but he points out that in the tomb U-j, no signs for ten seemed to occur on the tags. He explains this aberration by the supposition that in the case of textiles (which, indeed, were found close to those number tags), a horizontal (instead of a vertical) line represented ten units of a square ell (c.45 x 45 inches) of material. What further complicates the picture is that some number tags of U-j do contain vertical as well as horizontal lines. However, the reason is not so much to distinguish a "one" from a "ten", but the fact that, depending on the direction of the grain (in stone or wood), the more convenient direction (either horizontal or vertical) was chosen. A further assumption is that, possibly, a spiral *with* a line was used to indicate a specific quantity of textiles, while a spiral *without* a line referred to a specific quantity of corn. These comments may become relevant when Dreyer's findings are interpreted in relation to Schmandt-Besserat's thesis on the origin of abstract counting.

COMMENTARY ON DREYER'S CLAIM

As mentioned above, until recently the evidence about the oldest writing clearly pointed to Mesopotamia. Writing emerged from the token-envelop system during the last quarter of the 4th millennium B.C. Thereby clay tokens were impressed unto the surface of clay envelopes which, in turn, represented a kind of equity claim [cf., Schmandt-Besserat, 1977, 1978, 1992; Mattessich, 1987, 1994, 2000; Nissen et al., 1993]. Towards the end of this period, the Sumerians made their accounting entries by impressing the tokens on flat clay slabs

instead of impressing them on clay envelopes.² In the course of the next hundred years, those token-impressed clay tablets were further refined; first by engraving them with additional pictographic as well as ideographic symbols (proto-cuneiform writing), thus conveying additional business information. Later, the indentations were made with a reed stylus. At the same time, a sophisticated syllabary developed. Thus full-fledged cuneiform writing emerged. In time, this transcended its accounting and commercial origin, finding application in general information transmission, as well as in literature and poetry.

In contrast, Dreyer's claim is to have discovered the oldest writing, not only in Egypt but the "earliest" in general. As we have seen, this claim was based on a series of small, perforated bone and ivory tags (the size of postage stamps) each of which bore some signs, often similar to later hieroglyphics. Obviously this relatively recent discovery still has to be thoroughly evaluated and assessed by Egyptologists, Assyriologists and archaeologists in general. There is no apparent indication that the newly found proto-hieroglyphics influenced the cuneiforms of Mesopotamia, despite the evidence of trade between predynastic Egypt and the countries East of it. On the contrary, Aldred [1984, p. 77] states that the "first attempts at a pictographic system of writing have also been traced by some scholars, ultimately to a Mesopotamian source, particularly to the Jemdet Nasr culture which extended as far as Syria by the end of the 4th millennium B.C."

As to the precise dates of the inventory tags, the last word is not yet out, but if Dreyer's dating proves to be correct, the proto-hieroglyphics could precede the proto-cuneiforms of Mesopotamia, and possibly even the token-envelope impressions (pre-cuneiforms) out of which the proto-cuneiforms and cuneiforms arose. Yet here too, a full evaluation awaits the results of further research.

Not every archaeological discovery is of the same importance. Greater prestige is attached — not only by laypersons — to disclosing the origin of writing than to many

²As pointed out, for example in Mattessich [2000, pp. 6-7, 89-90, 103-104], the transition from the token-envelope system to subsequent accounting on clay tablets caused a loss of the double-entry features which the former system contained. Furthermore, the more convenient clay tablets no longer needed the tokens as symbols representing economic goods (assets); they used the tokens merely as tools for impressing those shapes, the impressions of which then represented those goods.

other archaeological discoveries (just as discoveries dealing with the descent of the human species have higher status in palaeontology). Thus the claim to have found the origin of writing has raised many questions, doubts and criticisms. Indeed, three major arguments have been advanced against Dreyer's claim. Firstly, the evolution of early writing in Mesopotamia is documented in much more detail [see Schmandt-Besserat, 1992; Nissen et al., 1993] than that of Egypt, as Robert Englund remarked to the editors of the "Why Files".³ Even if the origin of Dreyer's inventory tags can be shown to have preceded the *envelope-token* accounting, the fact remains that the later emerged out of *token* accounting, which can be traced back to 8000 B.C. by hard and fast evidence. Additionally, pretty much the same token shapes were used throughout most of the Middle East (Fertile Crescent). Although neither the simple nor the complex tokens can be considered "writing" in the proper sense, the pre-cuneiforms, proto-cuneiforms and cuneiforms evolved in direct ascendancy from this pre-historic information system.

Secondly, the pertinent carbon dating of Dreyer's findings is apparently only accurate within 200 years. This is a very tight margin of error (an argument submitted by John Baines to the "WhyFiles"),⁴ particularly as the Mesopotamian evidence for the origin of writing points at a time around 3200 B.C. [according to Nissen et al., 1993, p. 5]. This date even overlaps with Dreyer's claim for the earliest Egyptian writing. Thirdly, Baines also casts doubt on Dreyer's claim to have correctly deciphered the meaning of the inscriptions on the tags. Baines finds the number of signs on each tag too limited for meaningful deciphering — a powerful argument indeed. Dreyer's response that some of the tags carry not only two or three symbols, but occasionally four, may not quell this criticism.

POTENTIAL CONSEQUENCES

What are the consequences of Dreyer's findings for the archaeology and history of accounting? If his claim stands up to

³ See <http://whyfiles.org/079writing/2.html> [pp. 2-3] and also Baines [1998]. The 'Why Files' are a project created by the National Institute for Science Education and the Natural Science Foundation, funded by the Graduate School of the University of Wisconsin-Madison. Robert Englund is Professor of Archaeology at the University of California at Los Angeles.

⁴ See <http://whyfiles.org/079writing/2.html> [p. 2]. John Baines is Professor of Egyptology at Oxford University.

scrutiny, ancient Egypt would, indisputably, turn out to be the place where writing first originated. Yet, one still would have to show that this Egyptian creation was transferred to Mesopotamia, and that the Sumerian proto-cuneiform and cuneiform writing derived from Egypt. Otherwise it could be argued that writing originated independently, almost simultaneously, in Egypt as well as in Mesopotamia (and plausibly in other places, for example, in China and the Americas — possibly at a later time).

In the face of the overwhelming evidence which Schmandt-Besserat [1992] and others brought to bear on the derivation of writing from token-envelope accounting, sufficient evidence is unlikely to be found to prove the derivation of proto-cuneiform writing from those early Egyptian signs. Thus the “independence hypothesis” (also favored by Baines) seems to fare better at this stage. Indeed, the many differences between proto-hieroglyphics and proto-cuneiforms are surprising. Not only is the appearance of the writing totally different, but so is the material used, the technique involved and, to some extent, the usage — all this in the face of existing exchange of merchandise and ideas between the two regions during this critical period.

Whether Dreyer's claim is firm or shaky, we have to examine to what extent it could change or influence the arguments presented by Schmandt-Besserat [1992], Nissen et al. [1993] and Mattessich [2000, Chapters 1-5] amongst others. Whatever the outcome, the fact that token accounting can be traced to 8000 B.C. (and that the Egyptian tags with signs were attached to economic goods) reinforces the claim that commercial information and accountability gave the impetus to writing, whether invented in Mesopotamia, Egypt or both places. Even though the Egyptian tags cannot be interpreted as accounts, they obviously fulfilled, as vouchers or inventory labels, an accounting function.

Let us examine the potential implications of Dreyer's claim (if up-held) on the previous results of accounting archaeology. To do this, the major facts and hypotheses set forth by Schmandt-Besserat [1992] and Mattessich [2000, Chapters 1 to 5] are presented. The possible impact of Dreyer's claims are evaluated in the concluding section.

A Condensed Version of Relevant Arguments by Schmandt-Besserat:

1. In Sumerian economics of the late 4th millennium, sealed “bullae with attached stringed tokens” and “clay

- envelopes with tokens inside” were alternative ways of accounting for control, administration and the redistribution of wealth [cf. Schmandt-Besserat, 1992, pp. 108-128, 170, 178]. Thereby token-stringed bullae (clay seals), as well as clay envelopes with token content, bore witness to ownership or debt relations [cf. Schmandt-Besserat, 1980, p. 385; 1992, pp. 10, 166-183].
2. Before c.3250 B.C. the tokens were likely preserved in perishable containers (such as sealed leather pouches which later fulfilled the purpose assigned to clay envelopes). This assumption is supported by evidence that even after 3250 B.C. leather pouches were occasionally still used for storing clay tokens [cf. Schmandt-Besserat, 1992, pp. 9-10, 97-98].
 3. From about 3200 B.C. onwards, many of the sealed envelopes were *impressed* with the very same tokens contained inside those envelopes before sealing them [cf. Schmandt-Besserat, 1992, pp. 120-128]. The purpose of this improvement was apparently to facilitate the identification of the content without breaking the envelope.
 4. The subsequent proto-cuneiform (and later cuneiform) writing, which took over the idea of impressing those tokens (with additional explanatory engravings) but upon the more practical clay tablets, is evidence that *the first writing attempts arose out of commercial activity in general and accounting activity in particular* [cf. Schmandt-Besserat, 1992, pp. 130-154; Nissen et al., 1993, pp. 13-24].
 5. “The accountants of Uruk IV-a about 3100 B.C. invented the first numerals — signs encoding the concept of oneness, twoness, threeness, abstracted from any particular entity. This was no small feat, since numerals are deemed to express some of the most abstract thoughts our minds are able to conceive” [Schmandt-Besserat, 1992, p. 192]. Yet *abstract* numerals and abstract counting must not be confused with counting by *one-to-one matching* and *concrete counting* through tokens and specific number words, respectively. Such counting systems are obviously much more ancient [Schmandt-Besserat, 1992, pp. 184-194; Nissen et al., 1993, pp. 25-29].

A Condensed Version of Additional Arguments by Mattessich:

In interpreting Schmandt-Besserat’s theory from an

accountant's point of view [cf., Mattessich, 2000, 1994, 1987], the following arguments were advanced:

6. If writing and abstract counting emerged after the advent of token-envelope accounting, then the previously accepted assertions [i.e., Littleton, 1933, p. 12; Skinner, 1987, pp. 4-6] that the major prerequisites of accounting were writing and abstract counting turn out to be incorrect.
7. If a particular token represented a specific asset, and its token-form determined the type of commodity for accounting purposes, then this form or shape had the same function that today a specific asset account fulfils.
8. If the individual tokens inside an envelope represented assets, and the envelope stood for an IOU (in kind), then the token impression on the surface of the envelope, in their inseparable totality, can be considered a quantification of the corresponding equity.
9. The token-envelope system is more than merely an IOU. Seen from a modern perspective, it is a closed, double-entry representation (like a primitive balance sheet). Individual assets were recorded by inserting moveable tokens into the envelope (debit entries, representing a physical reality); while the very same quantity, but as an inseparable totality, was recorded by impressing the tokens onto the envelope (as credit entries, representing the social reality of a legal claim).
10. The transition from pictographic to ideographic representation in ancient Sumer sheds light not only upon Wittgenstein's question about the difference between "showing" and "saying" (that is, between illustrative versus written or oral representation) but, above all, on the early transition from the first to the second.

EVALUATION AND CONCLUDING COMMENTS

Concerning the ten items discussed above, in my view, Dreyer's claim could only have an impact upon items 4, 5, and 6. It possibly could affect item 10.

As to the argument of item 4, (particularly the italicized portion), two possibilities exist. First, assume that it could be shown that Sumerian writing derives from Egyptian writing. Then in order to maintain the argument that accounting was the impetus to writing, one would have to confirm the present assumption that the first Egyptian attempts at writing stem

from the necessity of inventory labeling in Egyptian graves and possibly from commercial transactions. Second, if the “derivation hypothesis” does not hold, the situation would be even simpler. One would merely have to substitute the expression of “the first writing attempts in Mesopotamia” for “the first writing attempts”. However, for accountants the major issue is whether the first writing emerged out of accounting activities—though it would be interesting to know whether writing emerged in Mesopotamia or in Egypt, or in both areas independently. This still seems to be an unresolved issue.

The argument of item 5 concerns the assertion that abstract counting was first conceived in Uruk at about 3100 B.C. This fairly specific statement is explained in Schmandt-Besserat [1992, pp. 184-194 and in some of her previous publications] with considerable detail in its evolutionary setting. Dreyer [1998, pp. 193-194], in contrast, deals with numerals in a less specific and much shorter way. However, if it could be demonstrated that the predynastic Egyptian “number tags” were based on an abstract counting system (instead of concrete counting), it could affect previous theories on the origin of abstract counting. There is no indication in Dreyer’s book that this was the case. Nor does any hard and fast evidence exist that counting in the abstract sense emerged in Egypt prior to its Mesopotamian origin, although this possibility is not completely eliminated. The existence of different number conventions for textiles as for corn (as mentioned by Dreyer) can hardly be used as evidence against abstract counting, since in Mesopotamia, long after the introduction of abstract counting, different measurement systems were still used for different commodities [cf. Nissen et al., 1993, pp. 25-29].

Dreyer’s claim also could affect item 6. Since this is a conditional statement, the consequence hinges on this very condition, which is found in item 1 together with item 4. The first one, I believe to be unaffected by Dreyer’s claim, but the second one may not be so. Thus the outcome will depend on the resolution of item 4, as discussed above. In other words, accountants hardly have to worry about Dreyer’s thesis, but some previous archaeological claims might be affected by it.

Finally, the assertion in item 10 could require a reformulation, yet its essence would remain unchanged. Since the Egyptian inventory tags with their proto-hieroglyphics also indicate a transition from “showing” to “saying” in Wittgenstein’s sense.

In summary, Dreyer’s claim, even if sufficiently verified and generally accepted, is unlikely to affect essentially the

hypotheses (advanced during the last two decades or so) of accounting archaeology, but could have an impact on the primacy of writing or perhaps even of abstract counting.

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